

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXI. No. 15.
WEEKLY.

BALTIMORE, MAY 7, 1897.

\$4.00 A YEAR.
SINGLE COPIES, 10 CENTS.

Manufacturers' Record.

PUBLISHED EVERY FRIDAY BY THE
Manufacturers' Record Publishing Co.
RICHARD H. EDMONDS, President.
OFFICE: MANUFACTURERS' RECORD BUILDING,
BALTIMORE.

RICHARD H. EDMONDS,
Editor and General Manager.

THOMAS P. GRASTY,
General Staff Correspondent.

NEW ENGLAND OFFICE—John Hancock Building,
178 Devonshire Street, Boston, Mass.
S. I. CARPENTER, Manager.

Special Traveling Representatives:
RICHARD S. EVANS,
I. S. FIELD.

SUBSCRIPTION, - - - \$4.00 a Year.
TO FOREIGN COUNTRIES, - - - \$6.50 a Year.

BALTIMORE, MAY 7, 1897.

A special supplement of the Manufacturers' Record this week is occupied by a history of the Seaboard Air Line, detailed descriptions of the territory through which that railroad passes and of the opportunities for capital and industry in the cities and the country along the line. Many interesting phases of life in Virginia, the Carolinas and Georgia are set forth, as well as valuable suggestions for the homeseeker and the investor.

The South and Corporations.

From different parts of the South come hearty responses to the general sentiment, expressed in different forms through the Manufacturers' Record by such representative men as Collis P. Huntington, John R. Procter and Hilary A. Herbert, that the Southern States are to be advantaged in direct proportion to their reasonable appreciation of the benefits arising from the employment of aggregated capital by corporations and their purpose to safeguard it. The published interviews with the gentlemen mentioned have been widely read, and have furnished the text for a number of editorials in Southern newspapers seconding the opinions and scattering the seed which cannot fail to bring forth an enriching harvest.

The San Antonio Express, referring to Mr. Huntington's advice that safety and hospitality be tendered the capitalist, says:

The Express is pleased to be able to state its belief that the tide has turned some time since in Texas, and that capital can have little or no cause to complain of the spirit in which its overtures are now met in this State. The legislature has risen to the demands of the people in several notable instances, and has shown a decided inclination to sit down upon the anti-investment crank, who has caused so much havoc in the past. The effect of this change of front is already noticeable, for more railroads, irrigation works, manufactories and other great enterprises are in a formative stage, with brighter prospects of realization than ever before. The problem of the day in Texas is the utilization of the vast areas of land which can now be bought for a song. Every dollar added to the value of an acre of land adds just that much to the permanent wealth of the State. Every new home constructed

and additional plan started on its never-ending journey adds in increasing ratio to the rate of our progress. Enterprises which bring desirable people to this State and make these lands more desirable are, therefore, the enterprises which should receive our heartiest and most generous support. New railroads, factories, agricultural immigration and irrigation enterprises are stupendous levers in forcing up these land values, and every legitimate proposition of this kind which comes up for consideration should be welcomed.

The Express very wisely calls attention to the existence of a faction that may do harm by the impression their empty and useless talk may create upon outsiders who are not fully aware of the light weight attached to such utterances by the people of the State. This seems to be the case in other parts of the South, for the Columbia (S. C.) Register says:

Mr. Herbert rightly predicts that Southern conservatism and soundness of principle will eventually place our securities in high favor in financial circles in the North. Already the signs of this palingenesis are abundant on every side, especially in Georgia and Alabama, and South Carolina also is, at last, awake to the great possibilities of the future. The pestilential demagogue—the man to whose sordid soul the race for office is the one and only object of life—is no longer a potent power in this fair land, and the day of his passing is not far removed. The business men of the South are driving the politicians to the wall, and the cheering hum of many industries drowns the blatant voices of those to whom "politics" are meat and drink, without which they would miserably perish. Let them perish, and the sooner the better.

To those who will not promptly follow the Register's suggestion, the Louisville Courier-Journal has a word to say. To the assertion that Mr. Herbert's utterances are weighty and worthy of consideration, it adds:

He refused to talk politics, but it must be apparent to Southern men that adhesion to populism is not the way to invite capital. The South, which produces no silver and which sells its products in gold markets, has been grossly misled by demagogues, who counsel it to tuck itself to the dump-cart of the silver-miners. Mr. Herbert knows the South and loves it, and his advice is worth more than that of a million of self-seeking mine-owners.

The Raleigh News and Observer joins in the chorus that the man who indulges in wholesale and indiscriminate denunciation of corporations should have no place in public life in the South, and contends that:

The wise man and the patriot is he who gives encouragement to large corporate enterprises, assisting them in the development of the resources of the country and holding them within the legitimate scope of the purposes for which they were chartered. A railroad is the chief material civilizer of the age. The extension and success of these common carriers is essential to progress and development. It is the business of a railroad to haul freight and passengers and to develop undeveloped sections. In this work there should be earnest co-operation on the part of all progressive communities. Mr. Herbert has done well to vindicate the South from the false charges that it seeks to hamper great corporations. It seeks to help them.

This harmonizes with the Macon (Ga.) Telegraph, which says:

We believe the Southern people have been aroused to the folly of putting undue burdens and restrictions upon corporations, and

that hereafter they will receive more liberal treatment at the hands of legislatures. They are realizing more and more that their trade is with the East, rather than the West, and especially since they have undertaken to produce those identical crops for which the agricultural West has been for so long the main source of supply.

Other opinions might be quoted, but enough material has probably been presented for the present to demonstrate that the wholesome leaven is working. With leading journals and men of repute pointing out the evils of crank legislation, attempted or accomplished, and the desirable benefits to be derived from the conservative treatment of the agencies for the welfare of any community, the ultimate effect upon the hard common sense of the South is beyond question.

But to hasten the results, persuasion and argument should not be relaxed, and the fallacy of every unreasonable manifestation of hostility to the best interests of the South must be sharply defined and its author held up to the condemnation he may deserve.

The agitator and the demagogue must be sent to their own place—and that place is not the hall of legislation or the executive chair in the conservative South.

Round Bale Co-operation.

Regarding the plan for putting into general use the new compress for turning out round rolled bales direct from the gin, which has been awaited with some anxiety in cotton circles, the Manufacturers' Record has word from John E. Seales, president of the American Cotton Co., that it has been decided "to begin at once the introduction of cylindrical compresses, and under the plan agreed upon planters and ginners will be able to avail themselves of the benefits of this invention on a liberal co-operative basis, with a market for their cotton assured." This message ought to set at rest the perturbed spirits of those individuals who from one cause or another had conjured up from the perfecting of the new round baling process a creature as indistinct as it was terrible, which, in some mysterious manner, was to work all kinds of undefined evils upon the cotton grower and the cotton manufacturer.

But here comes the announcement that planters and ginners will be offered the chance to share in the benefits of the new process upon a liberal basis, while in his address before the New England Cotton Manufacturers' Association Mr. D. C. Ball demonstrated the advantages that would accrue from it to the mill men.

Added to this must be considered the interview, published in another column, with Mr. Henry Hentz, president of the New York Cotton Exchange. He calmly and accurately gages the opposition to the new process, and from an independent standpoint, supported by practical experience, he says that "it is absolutely certain that cotton packed in cylindrical bales under the system adopted by this company will bring

higher prices all the world over than that packed in the prevailing style."

In the assured market and the higher price lies the advantage for the grower, and in the realization of that fact by the growers is the strengthening of Mr. Hentz's opinion that it is not "possible for the opposition to this innovation to prove other than self-limiting and temporary."

A Sign of Progress.

Our friend, the Charleston News and Courier, brilliant at times, but disposed to drowse, has suddenly awakened to a belief that its immediate territory has not been sufficiently exploited. Strange to say, it does not blame itself, but seems to be under an impression that the fault lies with the Manufacturers' Record. The alleged discovery and complaint are recorded in a criticism of a recent article in this publication, in which Mr. Thomas P. Grasty described the work of Mr. M. V. Richards in the immigration department of the Southern Railway.

The criticism is absolutely absurd to persons who have been awake recently, but it is worth a reference as an indication that our Charleston contemporary, though slightly belated, is beginning to bestir itself. After quotations which it is unnecessary to repeat the News and Courier says:

But "brave men were living before Agamemnon," and there were immigration agents before Richards, and immigration bureaus and "corporate co-operation" before the immigration department of the Southern Railway. For example, there was Dr. J. B. Killebrew, of the Nashville, Chattanooga & St. Louis Railroad, who has in the course of the last six or eight years actually brought in and settled along the line of his road over 10,000 thrifty, wide-awake and progressive people. Then there is Stuyvesant Fish, of the great Illinois Central system, who has been making an effective study for years of the business of "corporate co-operation." Then there is the Seaboard Air Line system, which has been doing a good deal in the way of inducing people to come in and help the natives to enjoy the blessings and rewards of living in the South. "And there are others." All these people and agencies and influences have also been making eloquent addresses and distributing industrial information and publishing "literature" and circulating tracts. Some of them were at work before the immigration department of the Southern system was established, and, while we join Mr. Grasty most heartily in what he has said in praise of Mr. Richards and his work, it would not be fair to forget the older friends we have had in the work of exploiting the magnificent resources of the South.

No one will deny these statements. But they are ancient history. No one who has read the Manufacturers' Record during the past fifteen years is in ignorance of them, or is likely to forget them. It is amazing, though, that the News and Courier has apparently just hit upon them, as it has given evidence from time to time of a reading of the Manufacturers' Record, and the same carelessness about a valuable source of information is manifest in its additional contention:

What we wish Mr. Grasty and the Baltimore Manufacturers' Record would do now is to say that the richest part of the South lies along the South Atlantic coast, around

and about the crossing of the eightieth meridian and thirty-third parallel of latitude; that it appears to have escaped the observation of the Southern system and its driving immigration department. This part of the South has been so overlooked that it is not in a position to pay for special descriptive accounts in the Record, but it would like to have some attention from those who are so sincerely devoted to the development of the South—not the South in shreds and streaks and patches, but the whole South.

A shaft of encouraging light pierces, however, the general gloom of the News and Courier's criticism: It thus bears indisputable testimony to its conviction that efforts to attract immigrants and to build up the South are commendable. Not many years ago it was accustomed to employ this kind of language:

The South is not worrying itself about immigration. It is neither encouraging immigration nor discouraging immigration. A few well-meaning persons and papers, here and there, are laboring under the delusion that it is their special mission to develop "the South" in that way, and they exert themselves very actively by getting together and passing resolutions and appointing committees and commissioners about once a year on an average. Their enthusiasm breaks out every spring, and usually exhausts itself before hot weather. Quinine does not ward it off, and failure does not chill it.

Among the many influences at the time working for the development of the South the Manufacturers' Record was one that regretted the failure of the News and Courier to identify itself with that movement. Now that the change to a reasonable position has been made, congratulations are to be extended that the News and Courier has placed itself somewhere around or about the crossing of the meridian of enterprise and the parallel of alertness.

But it must remember one thing. The Manufacturers' Record, whatever its willingness might be, cannot devote itself exclusively to one part of the South, even that "around and about the crossing of the eightieth meridian and thirty-third parallel of latitude," all the time, or to all of the South at one time, but its aim, which it believes has been successful, is to keep abreast of all legitimate movements for the full development of the South at all times, and to lose no opportunity to advance any of them in the hope of benefiting the whole.

Extensive Land Sale.

A dispatch from Middlesboro, Ky., announces that John Hayward, receiver of the East Tennessee Land Co., has been ordered by the court to begin the sale of that company's property on May 29. The lands lie in Roane, Morgan, Fentress, Cumberland, Carter and Unicoi counties, Tennessee, and are as follows: Two thousand acres of town lots, 95,000 acres of farm lands, 103,000 acres timber lands and 100,000 acres mineral lands, making a grand total of 300,000 acres.

At the annual meeting of the Anthracite Coal Operators' Association, in New York, Mr. H. S. Fleming was elected secretary of the organization. Mr. Fleming, who was formerly associated with the Manufacturers' Record, is a gentleman thoroughly fitted for the duties of this position, and the association is to be complimented upon securing the services of such a valuable official.

The coal shipments from Baltimore to the Pacific coast are unusually large at present. It is stated that fully 15,000 tons of bituminous coal will be shipped from this port to San Francisco and Portland by July 1. The coal is used largely for blacksmithing and mechanical purposes.

IDLE OPPOSITION TO THE NEW BALING SYSTEM

Interview with Henry Hentz, President New York Cotton Exchange, Who Endorses the Cylindrical Bale.

Directly will be given an interview with Mr. Henry Hentz, of New York, concerning the cylindrical bale; but before coming to that, let us for a moment consider an example of the peevish kind of opposition to this innovation which is manifesting itself in various ways throughout the South.

If the cotton business of the South is to be run in the interest of those whose profits come out of the burdens imposed upon the growers by useless intermediary "take-outs," then the new cylindrical bale should by all means be consigned to instant and eternal desuetude.

The Augusta Chronicle, which somehow or other I have always looked upon as representing the masses rather than the classes—as promoting the welfare of the many rather than that of the few—with lamentable inconsistency comes out editorially in favor of the interests of "the man whose business it is to sample cotton and grade it for sale or purchase," rather than in advocacy of what is good for the grower, and the force of a statement made by so eminent an authority as Mr. Alfred B. Shepperson is negated (in the estimation of the Chronicle) because he does not happen to be "in the business of handling cotton." Read the following and pass it on among the planters:

"It is just possible," says the Chronicle, "that one of the merits of the new system, as set out by its advocates, aids its unpopularity. Mr. A. B. Shepperson, in commending the cylindrical bale, says: 'Instead of having to employ brokers every time the cotton changes hands the guarantee of the company will be sufficient for all transfers without any further sampling. In this way a great saving in expense is effected.'"

Realizing, as it must, the importance to the grower of saving intermediary expenses, the Chronicle follows the foregoing with a sort of plea—which, perhaps, is made in a Pickwickian sense—for the continuation of useless burdens upon the masses in order to put more money into the pockets of the class engaged in the handling (not the growing) of cotton, couched in these words: "While that (i. e. the saving in expense) may be a feature that commends itself to the cotton-grower and to the idealist or theorist, it does not necessarily prove a strong point with the men whose business it is to sample cotton and grade it for sale or purchase."

If to help out the poor fellows who handle cotton be the duty of the hour, then by all means, instead of simplifying and cheapening the various processes for moving the cotton from the field to the mill, let us with might and main set to work to invent new processes that will inure to the benefit of the army of bale barnacles (how is that for a phrase?) now supported by the toil of the planters and cotton-growers of the South. Let us straightway offer prizes for the invention of additional ways and means to put money, at the farmer's expense, into the pockets of those "whose business it is to sample cotton and grade it for sale or purchase."

The Augusta Chronicle's article is a fair sample of the puerile opposition which is being prompted by those whose interests lead them to allow their wish to be father to their thought concerning the coming revolution in the system of packing cotton. Alas! that my illustrious friend, "Don Patrichio Walshio," should thus allow the cotton-handlers to throw dust into his beautiful sky-blue eyes!

The best interests of any country, of

any class of producers, as any child should know, are subserved by annihilating all unnecessary burdens, and if the cylindrical bale had no other merit its success would be inevitable in the long run, by reason of its lifting from the grower the necessity of supporting so many thousands of these very fellows "whose business it is to sample cotton and grade it for sale or purchase." The position taken by the Chronicle is rendered inconsistent by the following statement from Mr. Shepperson, which it was fair-minded enough to quote: "Instead of having to employ brokers every time the cotton changes hands, the guarantee of the company (controlling the cylindrical bale) will be sufficient for all transfers without any further sampling." And so, peradventure after all, Don Patrick is only having a little fun with the boys before the passing of their occupation.

In view of the various vigorous, but withal untenable, attacks that have recently been made on the proposition to pack the South's chief product in a civilized way, I sought an interview with Mr. Henry Hentz, of New York, who, as it happens, is president of the New York Cotton Exchange, but who, aside from that incident, is without a superior in knowledge of the cotton business, not theoretically (as is insinuated of Mr. Shepperson), but practically, by reason of the fact that the house of which he is the head has for many years been very active and eminent in the cotton business of this country. Indeed, it is perhaps no exaggeration to say that the judgment of Mr. Hentz is relied upon with a more abiding confidence in cotton circles, both in New York and throughout the South, than that of any other one man in the United States. Moreover, Mr. Hentz has no interest whatsoever in the cylindrical bale, as he assured me in reply to a point-blank question.

"It seems to me," said he, "that all obstacles in the way of a revolutionary change in the direction of a more civilized system of baling American cotton have now been overcome by the perfected mechanism of the new round-bale compress and by the plan for operating it, which I am informed has just been decided upon by the directors of the American Cotton Co."

"And it is absolutely certain," he added, "that cotton packed in cylindrical bales under the system adopted by this company will bring higher prices all over the world than that packed in the prevailing style."

I called his attention to the fact that this new system was being antagonized. "That," said he, "is very natural, because a great many people have large investments in plants and processes incident to the old system, and it is no more than human nature to fight against any invention or innovation that may deprive a large number of people of their occupations." "When I was in the exporting business," continued Mr. Hentz, "and owned some seagoing vessels, I well remember that one of the insurance companies declined to take the risk on our first iron ship on account of its being a novelty. The story is told that when John Jacob Astor was asked to take some stock in a gas company he replied that he had no faith in a scheme to produce light through a candle without a wick. When iron ties were first introduced to supersede rope around cotton bales they were bitterly opposed and discriminated against right here in the New York market. And so, partly through the interest

of people who would be affected by a revolutionary change, and partly through widespread disposition to look with disfavor upon any novelty, there would necessarily be, for a time, a good deal of antagonism to be overcome by the American Cotton Co.; but as the present cotton bale is the most deplorable commercial eye-sore of the age, it will ultimately have to go."

I asked him what he thought about the sampling question. He took the ground that in this respect the new bale had a decided advantage over the old, in that it was susceptible of double sampling, first by drawing samples from the bat in the process of rolling up the bale; second, by slicing out a sample whenever a new one may be necessary.

"No substantial improvement," he added, "would probably ever occur in the method of packing cotton except by a thorough and revolutionary change in the whole system. They did not pack cotton any better than it is packed now even when a pound of cotton was worth considerably more than an ounce of silver, and there has never been any improvement worth speaking of from that day to this."

"One of the best features of the cylindrical bale," said Mr. Hentz, "arises from the fact that it precludes the possibility of baling bowlders and old iron and selling it for cotton. You cannot conveniently get foreign substances into a bale made this way. The danger of injuring the machinery between the gins and the revolving bale is such as to insure greater care and cleanliness. So far as what is called 'mixed pack' is concerned, there is no more likelihood that this will be found in the cylindrical than in the square bale. Therefore, I cannot see how it is possible for the opposition to this innovation to prove other than self-limiting and temporary. The gentlemen who have the round-bale system in hand are able to manage it wisely and well, and experience has shown that every new departure calculated to diminish intermediary expenses in industry or commerce finally succeeds."

Such were the words of Mr. Henry Hentz, perhaps the most conservative, judicially-inclined and thoroughly well-informed cotton merchant in New York.

The cry about monopoly, that was raised some months ago in connection with the plan of operation which it was predicted that the American Cotton Co. had in contemplation, by people who knew nothing of its plans or purposes, has been silenced by the announcement made in a telegram from Mr. Searles, the president of that company, to the effect that these machines will be put out through the South on a liberal co-operative basis, and one entirely satisfactory to planters and ginners. Those who have wisdom enough to avail themselves of the opportunity to keep up with the spirit of the age—gumption enough to get into the procession instead of getting left—are advised to negotiate with General Manager A. W. Walburn, whose office is at No. 944 Monadnock Block, Chicago, who told me, the other day while in New York, that there were a number of round-bale compresses now ready to be set up throughout the South, and that propositions from responsible planters and owners of gineries will from now on be promptly considered.

THOMAS P. GRASTY.

According to the report of State Geologist Eugene A. Smith, the mineral productions of Alabama for the month of March included 380,364 tons of coal, 84,529 tons of coke, 60,126 tons of pig iron, 160,000 tons of iron ore. In the iron and coke industry the number of employees engaged aggregated 13,000.

Industrial News from Birmingham.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., May 3.

It is too early yet to announce the effect of the reduction recently made in freight rates on iron and pipe. The average rate is lower than any ever given heretofore, and if there is any life at all in the trade, it will be manifested in the immediate future in the orders to this district. The new freight rate is an open one, and is so low that there is no division with the buyer of the benefit. He gets it all. As sales in this district have been made of late on f. o. b. basis, the reduction in freight rate has no influence on initial price of iron, but to Western and Eastern buyers the c. a. f. price is lowered just the amount of freight reduction. This reduction is, succinctly stated, fifty cents to Cincinnati points and forty cents to Chicago points. As a matter of interest to the trade, the new rate is given in detail to main centres, viz.:

Western Points.—Louisville, \$2; Cincinnati, \$2.25; St. Louis, \$2.75; Chicago, \$3.25; Cleveland, \$3.50; Detroit, \$3.40.

Eastern Points.—Savannah, \$1.75; Baltimore, \$3.10; Philadelphia, \$3.25; New York, \$3.25; Boston, \$3.60.

The small trade that characterized the past week is attributed to the freight reduction, which leaked out, as usual, before the official promulgation. Many bids came in on a basis of \$5.50 for gray forge, only to be declined. One interest declined orders amounting to fully 20,000 tons based on \$5.50 for gray forge. Outside of small, regular orders, at regular furnace prices, there were no transactions. At \$6 for gray forge and \$6.50 for No. 2 foundry the furnaces are ready to write any orders that may come. Below this, he is a good buyer who succeeds in having his order registered.

At the rolling mill they are pushing the steel plant, and are using every effort to fulfill their prediction of rolling steel by July. It looks that way now, and only some untoward event will prevent.

The contract for the necessary buildings of the print mill have been let to the Birmingham firm of I. C. Thompson & Bros., who take the subscriptions made in material at the market price. The main building will be 127x296 feet, four stories high, and to have 100 looms and 32,400 spindles, the whole to be run by steam from a 1000 horse-power boiler.

At the subletting of the contracts for the various parts of the bridges on the extension of the Mobile & Ohio Railroad to Montgomery, the Birmingham firm of Hardaway & Watkins secured the contract for the masonry work, amounting to \$30,000.

Most of the work connected with the Eutaw Water Works comes to Birmingham, as the Hardie-Tynes Machine Co. has secured the contract for the engine, and W. M. Fulton fell heir to the standpipe, which an Augusta firm had. But the string tied to it broke, and it finally was landed here. The minor industries have nothing to report demanding special mention.

The differences between the Tennessee Company and its miners remains unsettled. The miners at their meeting on Saturday proposed to arbitrate the differences, the arbitrator to be chosen by a representative from each interest concerned. That proposition is before the Tennessee Company for action, but as the president, Mr. Baxter, is out of the city at this writing, nothing further can be stated, as he has had and will have, till a conclusion is reached, control of action.

J. M. K.

The board of directors of the Sloss Iron & Steel Co., of Birmingham, has

re-elected the present officers, as follows: President, Sol Haas, Birmingham; vice-president, E. W. Rucker, Birmingham; secretary, W. L. Sims, Birmingham.

LOUISVILLE, KY.

Its Munificent Endowment and Large Progress to Be a Great Manufacturing Centre.

By Gen. I. W. Avery.

The needs for manufacturing are: 1. Fuel or water-power. 2. Raw material convenient. 3. Ready and cheap way to markets. 4. Health and cheap food for operatives.

Louisville has this factory equipment fully.

She has a vast store of fuel in her coal mines of her own of 15,500 square miles, from which she mines 3,250,000 tons of the best fuel, and could use the water-power of the Ohio river at her door. The coal sold at a profit in 1896 under seventy-five cents a ton.

Her raw material is of multiplied kinds, convenient and inexhaustible, and includes tobacco, grain, hardwoods of all kinds, iron ore, clays for tiles, pottery and vitrified brick, asphalt, cement, stone, glass sand, hemp for rope, cotton, etc.

Her means of transportation embrace water and rail carriage in every direction and to every point of the compass.

The health of Louisville is superior, the death rate being less than in any city of the same size in the country, and the soil around her produces bread and meat at a minimum cost.

Thus supremely conclusive is the theory of Louisville's manufacturing possibilities. She has all conditions to invite industrial investment in every field of manufacture.

Has the theory panned out into practice? Has there been actual realization?

Great and many industries have grown into life and profit. General prosperity has attended factories of all kinds. Cheap and good fuel and raw material, bought and hauled at low cost, with labor living in health and fed well at small expense, and the products gotten to markets easily and cheaply, have made mills pay.

City factories number 2050, employing 27,000 people, use \$43,000,000 of capital, pay \$12,000,000 of wages and make \$45,000,000 of goods.

The goods include plows and farm tools, wagons, harness, cloth, axes, furniture, handles, pipe, terra-cotta, brick, cement, glass, leather, tobacco, iron things, ice, whiskey, etc.

The tobacco market is the largest in the world. The houses here can store 40,000 hogsheads of 2000 pounds at once, and they sell to Europe and Africa. Millions of pounds of plug are made by fifteen mills, and millions of cigars also.

Kentucky has 20,000 square miles of hardwood forest. Louisville has a single wagon factory with 1,000,000 of capital, thirty acres of land and ten acres of buildings; one plow factory, of four great ones, is the largest in the world—the Avery plant.

Of thirty iron concerns, one makes 200 tons a day of pipe. Nearly 150,000 tons of iron are yearly used, and Louisville is the fifth iron centre in rank. There are eighteen tanneries, with \$3,000,000 in capital.

Of cement, 15,000 barrels are made.

The famed Kentucky jean mills are five, use 1500 hands, and clothes are made by 1800 more hands, worth \$3,500,000.

A cotton mill has \$300,000 capital. The Louisville & Nashville Railroad works 3000 mechanics on engines and cars. There is a plate-glass and mirror factory. Shoes are made. Barrels are a large industry.

Enough has been given to show the

superb factory future of Louisville, and its large and solid growth already.

"Southern States" Magazine.

In accordance with its policy of setting forth the truth about the South of the past as well as of the present, and of promptly showing the fallacy of much so-called history, the "Southern States" magazine for May discusses editorially Col. Thomas Wentworth Higginson's reminiscences of his experiences in Kansas and his connection with John Brown's raid. The attempt at what is termed a correction of "perverted history" is sharply criticized and its weakness is clearly proved by Colonel Higginson's own words.

Dr. Charles W. Dabney, Jr., adds this month to the valuable series of papers which he is contributing to the "Southern States" another of practical and vital importance to the farmer. Treating of the erosion of soils traceable in its rapidity to a variety of causes, he demonstrates the necessity for attention to the subject and for instruction in methods of restoration. He clearly outlines the operations for the preservation of hillside soils and the redemption of land that has been washed and gullied into unsightliness and waste, but the curing of old washes and the prevention of new ones are only part of the task. Too frequently it is hampered by the fact that man has removed the means whereby nature would have been able to aid him in rebuilding the soil. Commerce, cultivation and carelessness have robbed the hilltops of their trees and shrubbery; there remains no covering to hold the rain, which, rushing down the hills in torrents, increases the work of destruction. Much of the labor of the farmer, therefore, will be lost until the hilltops are covered again.

Mr. Richard H. Edmonds, editor of the Manufacturers' Record, contributes to this month's "Southern States" an article tersely summarizing the recent trend of foreign trade to Southern ports and clearly pointing to the ultimate advantages that are to accrue to the South. He clearly shows that a complete change in the railroad map of the country is being made. Eastern trunk lines no longer dominate the handling of the products of Western farms and packing-houses. From this movement, he says, will come the building up of a number of large financial and commercial cities on the South Atlantic and Gulf coasts, the great trade and industrial expansion consequent upon the operation of successful railroad systems, the increase of regular steamship lines between Southern and European ports, and generally a well-rounded development destined to more than duplicate in the South the prosperity of leading Eastern States.

Activity at Greenville, S. C.

The city of Greenville, S. C., is the centre of considerable industrial and other activity at present. The Manufacturers' Record has already described the cotton mills which have been located here within a short time. In addition to these features, the Southern Railway Co. has determined to make Greenville the terminus of one of its divisions, which will add a number of families to the population. This decision of the company will necessitate the building of about two and one-half miles of tracks or sidings at Greenville; also a roundhouse to accommodate eighteen locomotives. Several of the parties who are constructing the electric line in Charleston have been examining the opportunities for such investments in Greenville, and have obtained authority from the city council to build a street railway four miles long in the city. About eight miles from Greenville is

Paris Mountain, a summer resort, and there are prospects of extending this electric line to the mountain or of building a separate road to connect it with the city.

A MODEL INN SUGGESTED.

Advantages of Charleston as a Resort for Travelers.

In a letter to the News and Courier a Charlestonian expresses surprise that no intelligent and business-like effort has been made to erect in Charleston a modern inn which in location, design and environment would not only attract visitors from other States, but would be a desirable social centre for the city. He believes, and his argument seems conclusive, that about \$250,000 would be sufficient to start the "travelers' rest" convenient to salt water, hunting and fishing. As to the site he says:

"There is a location simply perfect from every point of view—the water lot on South Battery, adjoining White Point Gardens, about 150 feet front by 1500 feet deep, running down to the channel of Ashley river; the unquestioned title in the city council of Charleston. This water lot enclosed to the depth of the garden wall, with its ample frontage on South Bay street, would furnish area enough for an 'inn' of 500 or more rooms, and such spacious piazzas to the south, overlooking fifteen square miles of salt-water view as really cannot be had anywhere else in the Union. Projecting from the south water front an iron pier could be built fifty feet wide and 300 to 400 feet long towards the channel of Ashley river. At the end of this unrivalled promenade a casino or concert hall would be available, and below the most desirable of salt-water bathing; old ocean itself, changing its invigorating waters twice every twenty-four hours."

The business men of Americus, Ga., have reorganized a board of trade for the purpose of developing the city in every way possible from a commercial standpoint. The officers elected are as follows: G. W. Glover, president; P. C. Clegg, vice-president; John B. Felder, treasurer, and A. R. Eldridge, secretary.

The home industry agitation, which has become quite extensive in the Southwest, has been favorably received in Houston, Texas, and a Home Industry Club organized in that city, with a number of the leading business men as officers. There is a possibility that it will become a branch of the Business League of the same city.

Some comments of Mr. Theophilus Tunis, chairman of the executive committee of the National Lumbermen's Convention, on the report of the Secretary of Agriculture relating to the timber supply, have been published in pamphlet form. Mr. Tunis contends that nothing less than a duty of \$2 will equalize freight rates alone; that that will not prohibit except the very low grades, but will yield the largest revenue with the smallest importation.

America has its castles as well as European countries, and those on the Hudson river have as interesting a story in a way as the famous buildings on the Rhine. John P. Ritter tells this story in a liberally-illustrated article entitled "Some American Castles," in the May number of Frank Leslie's Popular Monthly. The "Fair Maids of Morocco" are pictured and described by Frederick A. Ober in the same number. Another important article is "Japan's Three Invasions of Korea," by Teichi Yamagata, a relative of the great Japanese marquis. It is accompanied by many excellent pen-and-ink drawings of views in Japan and Korea.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

New Passenger Association.

The Southeastern Passenger Association, which was referred to in the last issue of the Manufacturers' Record, will include the following lines: Atlanta, Knoxville & Northern Railway, Atlanta & West Point Railroad, Atlantic Coast Line, Central of Georgia Railway, Florida Central & Peninsular Railroad, Florida East Coast Railway, Georgia & Alabama Railway, Southern & Florida Railway, Louisville & Nashville Railroad, Mobile & Birmingham Railroad, Pennsylvania Railroad, Plant system, Richmond, Fredericksburg & Potomac Railroad, Southern Railway, Tifton & Northeastern Railroad, Western Railway of Alabama. The Seaboard Air Line system has not joined the association.

The election of officers resulted in the choice of Henry Walters, president of the Atlantic Coast Line, as president, and Joseph Richardson, formerly commissioner of the Southern States Passenger Association, as chairman of the conference committee of the new association.

The following executive board will serve for the ensuing year: H. Walters, president Atlantic Coast Line; E. C. Spalding, vice-president A. K. & N. R. R.; George C. Smith, president A. & W. P. R. R.; W. W. Finley, vice-president Southern Railway; S. R. Knott, vice-president L. & N. R. R.; B. W. Wrenn, of the Plant system; N. S. Pennington, of the F. C. & P. R. R.; William Checkley Shaw, vice-president of the G. S. & F. R. R.; J. R. Parrott, vice-president of the F. E. C. R. R.; C. A. Taylor, of the R. F. & P. R. R.; H. H. Tift, president of the T. & N. E. R. R.; Cecil Gabbett, vice-president G. & A. R. R.; John M. Egan, vice-president of the C. of Ga. R. R.; T. G. Bush, president of the M. & B. R. R.; J. R. Wood, of the Pennsylvania Railroad.

The territory of the association is south of the Ohio and Potomac and east of the Mississippi river.

To Extend to Fitzgerald.

The Manufacturers' Record during the last few weeks has referred to several railroad companies in Georgia which contemplate extending their lines to Fitzgerald, in the southern part of the State. Among those is the Wadley & Mt. Vernon Railroad Co. At present this line is in operation from Wadley to Rixville, twenty-nine miles. It connects with the Central of Georgia system; also a short line running from Louisville, Ga., which is called the Louisville & Wadley Railroad.

In a letter to the Manufacturers' Record, General Manager G. D. Tysor states that the proposed extension will be seventy-five miles in length. It will traverse the southeastern portion of the State, and at Fitzgerald connect with the Georgia & Alabama system, giving the latter an entrance into a very productive section of the State, and giving the towns along the Wadley & Mt. Vernon a competitive route to the seaboard at Savannah.

A Proposed Consolidation.

According to a report from Savannah, Ga., negotiations are under way with a view of consolidating all of the street-railway lines in that city. The plan is to combine the lines of the Savannah Traction with what is known as the Parsons system. It is stated that to finance the scheme an issue of \$1,500,000 in bonds will be made. In case the consolidation is effected, several of the parallel lines

will be abandoned. J. H. Johnston, of the City & Suburban Co., is to be president, it is reported, and J. G. Collins, superintendent, of the new company.

Another Baltimore Suburban Line.

It is announced that the necessary financial arrangements have been completed for constructing what is known as the Falls Road electric line, which has already been described in the Manufacturers' Record. It will be consolidated, when completed, with the Pikesville, Reisterstown & Emory Grove Railroad, forming a new road from Baltimore into the suburbs. It is expected to finish the Falls Road and branches by September 15, and to complete it as far as Mount Washington by July 20. The financial details were arranged through the Maryland Trust Co. The capital stock is to be \$1,000,000, and the company has decided to issue bonds to the extent of \$1,250,000. They are to bear 5 per cent. interest, the Maryland Trust Co. acting as trustee. The title of the company is to be the Baltimore & Northern Electric Railway Co. It is stated that power will be supplied from the station used by the Pikesville, Reisterstown & Emory Grove Company. The necessary rolling stock has been ordered, and a contract let for the track work, etc., to J. G. White & Co., of Baltimore. Henry A. Parr, of Baltimore, is president of the railroad company.

Charleston as a Cattle-Shipping Port.

The success of exporting cattle from New Orleans and Galveston has attracted the attention of the Charleston Freight Bureau, which has begun an agitation, with a view of securing shipments of livestock from this city. Mr. John A. Smith, manager of the Freight Bureau, has requested Congressman Elliott, of South Carolina, to have the quarantine regulations modified if possible, relative to the exportation of cattle from Charleston. An article from the Manufacturers' Record on the shipment of cattle through New Orleans has been forwarded to Mr. Elliott by the Freight Bureau. It is understood that the South Carolina & Georgia Railroad Co. is favorable to the scheme, and that Messrs. Simpson, Spence & Young, steamship agents of New York, will furnish vessels to accommodate at least 250 head each.

Alabama Coal Shipments.

A statement has been made that, owing to the opening of the water route from the Warrior river coalfields to Mobile the cost of coal delivered at tidewater has been reduced nearly \$1.60 per ton. This route has been already described in the Manufacturers' Record. The coal is floated by water from the mines to the wharves at Mobile, so that no rehandling is necessitated along the route. It is believed that the reduced cost of the production will cause the investment of considerable additional capital in the coalfields, and that the cost of mining will be reduced by the use of improved apparatus, so that a further reduction can be made in the price delivered at tidewater.

The Proposed Mississippi Bridge.

Relative to the report that work is to be commenced on the railroad bridge across the Mississippi river at New Orleans, the Manufacturers' Record has received a letter from President A. C. Hutchinson, general manager of the Southern Pacific Railroad system, in which he states: "Nothing has been done for sometime with respect to the construction of the bridge across the Mississippi river above the city. The matter has been dormant for the past year or so,

owing to the difficulty of making requisite financial arrangements under the present condition of affairs."

Locomotives for Southern Lines.

Among the recent orders received by the Richmond Locomotive Works are two from the Seaboard Air Line and the Southern Railway Co. The order from the Southern Company is for ten consolidated freight locomotives, with 21x28-inch cylinders, and two 10-wheel passenger engines, with 21x28-inch cylinders. The Seaboard Air Line order is for two 10-wheel locomotives, with 19x24-inch cylinders. The new engines are to be equipped with the latest improvements, and are to be of the finest type of workmanship. These orders indicate the high favor in which the Richmond Locomotive Works stands with the railway companies; also the condition of the railroad traffic in the South, which necessitates the increase of rolling stock for railway companies. The Southern and Seaboard Air Line have placed several large orders for locomotives within the last two years, and the last contracts given out are in addition to these.

Baltimore Steam Packet Co.

Stockholders of the Baltimore Steam Packet Co., at their annual meeting at Baltimore, elected the following directors: Messrs. R. C. Hoffman, Louis McLane, Charles F. Mayer, Wm. Pinkney Whyte, Arthur George Brown, William L. Savage and Charles Chauncey, of Philadelphia, and Elihu E. Chauncey, of New York. Mr. Brown succeeds the late Enoch Pratt, and Mr. Chauncey, of Philadelphia, succeeds the late Moncure Robinson. At a meeting of the directors President Hoffman was re-elected.

Railroad Notes.

John P. Baldwin has been elected president of the Orleans Street Railway Co. of New Orleans, La.

M. A. Boyd, of Richmond, Va., has been appointed New England agent of the Southern Railway Co., with headquarters at Boston.

It is announced that Thomas C. Purdy, vice-president and general manager of the Missouri, Kansas & Texas system, has resigned, and has been succeeded by A. A. Allen.

According to a dispatch from New Orleans, the Texas & Pacific and Missouri Pacific Railroad companies have determined to consolidate their offices in that city, with S. G. Miller as general agent.

Messrs. Ernest Bullock, of Jackson; Newborn White, of Pulaski, and J. W. Thompson, of Chattanooga, Tenn., have been appointed railroad commissioners of the State, under the law recently enacted by the legislature.

Receiver Felton, of the Cincinnati Southern, is making a series of tests to ascertain the pulling capacity of the engines on that railroad, with a view to running heavier trains than have hitherto been run.

The stockholders of the Nashville & Knoxville Railroad have elected as directors A. J. Crawford, John L. Crawford, J. A. Crawford and L. S. Holt. The annual report shows gross earnings for the year to be \$89,000; operating expenses \$72,000.

M. H. Dooly has been appointed temporary receiver for the Northeastern Railroad of Georgia, on the petition of T. J. Ripley, of Atlanta. He claims the present lessees, E. A. Richards & Co., of Atlanta, have borrowed funds which are now due.

At the annual meeting of the Little Rock & Fort Smith, Little Rock June

tion and Kansas & Arkansas Valley Railroads, George Gould was re-elected president; S. H. H. Clark, vice-president, and A. H. Calef, secretary and treasurer. These lines are already in the Gould system.

Vice-President Frank S. Gannon, of the Southern Railroad Co., announces appointments, to be effective from May 1, as follows: E. Ryder, assistant superintendent of the first division; W. C. Sprigg, assistant superintendent of the third division, and A. Gordon Jones, assistant superintendent of the sixth division.

The report of Receivers Cowen and Murray, of the Baltimore & Ohio Railroad Co., for the month of March, was filed yesterday in the United States Circuit Court. The report shows: Total traffic receipts \$2,519,695.86; total miscellaneous receipts \$284,974.99; grand total \$3,175,885.12. Total traffic payments \$424,017.30; total miscellaneous payments \$2,298,799.46; cash on hand and in depositories \$453,068.36.

A steamer was recently loaded at Port Royal, S. C., with a cargo which indicates the diversity of Southern export products. It included 250 tons of phosphate rock, 5300 bales of cotton, thirty carloads of lumber, four carloads of dogwood for shuttles, four carloads of tobacco, one carload of boat oars, one carload of paint and one carload of cotton goods made in Augusta, Ga. The cargo came entirely from the Southern States, and is for distribution in Great Britain.

The Blue Ridge Dispatch, alluded to several weeks ago in the Manufacturers' Record, has been organized, with George S. Costa, of Harrisburg, Pa., as general manager of the line. Freight will be shipped from New York by way of Allentown and Shippensburg, Pa., Hagerstown, Md., and Basic City, Va., to Cincinnati and St. Louis. The Philadelphia & Reading, Western Maryland, Norfolk & Western, Chesapeake & Ohio and Louisville, Evansville & St. Louis roads are interested in the surveys.

ERECTING AN ELEVATOR.

The Louisville & Nashville's Big Structure at Pensacola.

A special dispatch from Pensacola, Fla., to the Manufacturers' Record says:

"The Louisville & Nashville Railroad Co. has commenced the erection of an immense grain elevator, with a capacity of half a million bushels. The elevator will be on the same wharf as the company's mammoth export and import warehouses. When the elevator and the work on the bar, which will give twenty-five feet, is completed, Pensacola will lead with export and import facilities."

Inspecting Georgia Gold Mines.

A party of Western mining prospectors and capitalists have recently been visiting the gold-producing section in the vicinity of Dahlonega, Ga. The visitors included Hon. Adlai Stevenson, of Bloomington, Ill., ex-Vice-President; John B. Atkinson, of Earlington, Ky., a prominent coal miner; Isaac Baker, William M. Duncan and C. K. Kirkpatrick, of Nashville, Tenn. The party visited the plant of the Appalachian Mining Co. in the vicinity of Dahlonega, and inspected the works; also the formation of the deposits. It is reported that the party have been prospecting in this section with a view of making investments in the property if they decide it would be profitable. It is stated that the Appalachian Company, of which William M. Duncan is vice-president, has recently purchased what is known as the Wahl goldfields near the mines, which it is now operating, and will develop them on an extensive scale.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, May 3.

Despite the fact that there was a very important holiday here last week, which generally means little business on the day previous also, the cotton-oil market has displayed particular activity, with a greater volume of business transacted than in a long time past. The business done has been mostly for export and at material advances. As indicated last week, holders have displayed indifference to orders at the then quoted figures, but in the meantime have become masters of the situation. Thus heavy sales of prime summer yellow are recorded at 24 cents. Some 4000 barrels changed hands at this figure, and about 500 at 23½ cents. These shipments were for France and Austria. Two thousand barrels of off-grade yellow for export were taken at New Orleans—1000 at 22 cents and 1000 at 22½ cents f. o. b. There were likewise some heavy sales of crude in bulk in Georgia at 18 cents f. o. b. cars at mills. This latter was thought to be for a Western lard refiner. New Orleans took 1000 more barrels of off-grade at 22½ cents f. o. b. for export, while Galveston got 1000 barrels of prime yellow for export at 23 cents f. o. b. In addition to these sales there was the usual jobbing business. Wednesday's market, after the holiday, showed no setbacks in the advance; on the contrary, the tendency continued upward. At Galveston 4000 barrels of prime summer yellow were taken at 24 cents f. o. b. ship for export, and 4000 barrels of the same grade at Memphis. Towards the close the offerings of crude in tanks are light, with 17 cents as the possible price at Atlantic coast points. The market is exceedingly firm, without, however, much likelihood of further immediate advances. The following are closing prices: Prime crude 21 cents; loose f. o. b. mills 17 to 18 cents; prime summer yellow 24½ cents; off-grade summer yellow 23½ to 24 cents; yellow butter grades 26½ to 27 cents; prime white 26½ to 27c.

There is some difficulty in accounting for the advances above noted, unless it be the fear that stocks are diminishing, which means a stiffer market as the season progresses. In the meantime the conditions in the lard and soapmaking trades do not justify much business with cotton-oil people. The new tariff bill, which has yet to pass the United States Senate, restores the duty of one cent per pound on tallow. Should the item be so listed tallow is expected to reach a much higher range of price, in which event the cotton-oil trade may once more come closely in touch with the soap trade.

Cake and Meal.—The market has developed some firmness, with no unusual transactions to report, however. Southern advices report the situation unchanged. New Orleans quotes meal jobbing per carload at depot at \$15.75 to \$16 per short ton of 2000 pounds for export.

Cottonseed-Oil Notes.

The Wortham Cotton Oil Co., of Wortham, Texas, was chartered last week. The capital stock is \$25,000. The incorporators are L. N. Barbee, T. A. Bounds, M. C. Tynes and others.

A new enterprise projected for Griffin, Ga., is a cottonseed-oil mill and fertilizer factory. The capitalization of the company will be \$25,000, with the privilege of increasing it to \$100,000. The com-

pany is to be known as the Joseph D. Boyd Manufacturing Co., and a charter will be granted next week.

The market for cottonseed oil in Texas was a shade firmer last week, in sympathy with the advance in prime summer yellow oil in New York. The following quotations were posted in the Austin Cotton Exchange last week: Prime crude cottonseed oil, loose, 16 cents; refined butter oil nominal, and prime summer yellow oil 18 cents; cake and meal f. o. b. at interior points was quoted \$12.50 to \$14 per ton.

The market for cottonseed products in New Orleans on the 1st inst. was steady. Prime crude oil in bulk 17½ to 18 cents; prime summer yellow in barrels 23 to 24 cents; meal and cake \$16 to \$16.25 per short ton, and \$18 to \$18.25 per long ton for export. Receivers' prices ranged as follows: Cottonseed \$9 per ton (2000 pounds) delivered to the mills; cottonseed meal jobbing at depot \$16 to \$16.25 per short ton, and \$17.75 to \$18 per long ton for export f. o. b.; cottonseed oil 18 to 19 cents per gallon for strictly prime crude, in bulk 17 to 18 cents, and 23 to 24 cents for refined oil at wholesale for shipment; oilcake \$17.75 to \$18 per long ton f. o. b.; linters—A 3½ cents per pound, B 3½ cents, C 2½ to 3 cents; hulls, delivered at 15 to 20 cents per 100 pounds, according to location of the mills.

Textile Notes.

A movement is on foot at Dublin, Ga., for the erection of a cotton mill, and Mr. Jas. M. Finn is interested in the proposed enterprise.

The Montgomery Cotton Mills, of Montgomery, Ala., has ordered the machinery to effect the increased capacity noted recently as determined on. The plant will produce any kind of goods, from 12-ounce duck to five-yard sheeting, when the improvements are completed.

The annual meeting of the Sumter Cotton Mills, of Sumter, S. C., was held April 27. The issuance of new bonds to the amount of \$35,000 was discussed, and the issuance decided affirmatively. These bonds will run for twenty years and bear 6 per cent. interest, and will take up the outstanding bonds. The following directors of the company were elected: R. M. Wallace, E. W. Moore, R. D. Lee, M. G. Ryttenburg, M. Mansem, A. Moses, D. J. Winn, E. P. Ricker and A. Ryttenburg.

Bids were opened at Birmingham on the 30th of April for the erection of the Avon Cotton Mills' buildings. The contract was awarded to Messrs. T. C. Thompson & Bros., of Birmingham, and the structure will be commenced at once. The Southern Manufacturing Co., of Gadsden, Ala., will supply the timber to be used, which will cost about \$5000. It will be a four-story building, 127x296 feet, and will have space for 32,400 spindles and 1000 looms. The product is to be fine gray goods; Mr. David Trainer, secretary and manager of the company.

To Push Its Southern Business.

J. W. Taylor, for six years manager of the Stilwell-Bierce & Smith-Vaile Co., formerly with headquarters at Atlanta, Ga., and of late at No. 21 Light street, Baltimore, has resigned his position to accept the general agency for the Buckeye Engine Co., of Salem, O. Mr. Taylor's headquarters will be in the Manufacturers' Record Building, Baltimore, and he will cover the entire South Atlantic States, from Delaware to Mississippi. The Buckeye Engine Co. is among the oldest and most reliable builders of high-grade automatic engines in the world. It is strong financially, and proposes to push its business harder than ever in the South.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., May 6.

The movement in phosphate rock at this port still continues light, and manufacturers are purchasing very little at the moment. There are few vessels reported for charter to load rock at producing points, and arrivals are generally light. The reports from mining sections are generally of a more encouraging tone, and the work of development will likely be more vigorous during the summer months. In South Carolina there is a fair demand from domestic sources, and prices hold nominally steady. There is also some foreign demand for rock, and a large steamer is to load soon at Coosaw for St. Louis de Rhone. The shipments from Florida ports for April show up remarkably well, and at Fernandina the movement is quite active. In the Tennessee field there is more activity than usual, and shipments are now being made through Pensacola to foreign and domestic ports. In the local market this week rates of freight on rock are still very steady. In New York business in sail tonnage was quiet, and rates for long-voyage tonnage are steady. The following charters were reported: Schooner Andrew Adams, 771 tons, from Pensacola to New York with phosphate rock at \$2.25 net; British steamer Orfordness, 1260 tons, from Coosaw to St. Louis de Rhone with phosphate rock on private terms; British steamer Caxo, 1291 tons, from Fernandina to Certe with phosphate rock at 16/3, May; Norwegian steamer Hero, 1772 tons, from a Southern port to the United Kingdom or Continent with phosphate rock on private terms, and schooner C. R. Flint, 253 tons, from Cartaret to Norfolk with fertilizer at 60 cents.

Fertilizer Ingredients.

The market for ammoniates during the past week has been quiet, with a moderate volume of business reported. Messrs. Thos. H. White & Co., in their circular for April, say: "While the demand for ammoniates for the past month has been equal, or nearly so, to that of the preceding month, the market has had a downward tendency, and the close of the month shows a decline of several points. Only one of the tankage contracts that must come on the market May 1 has been sold, and buyers show no anxiety to secure those left except at prices much below sellers' views." Ground blood is quoted \$1.37½ per unit f. o. b. Chicago, and \$1.30 f. o. b. Kansas City; crushed tankage 9 and 20 at \$11.50 f. o. b. Kansas City, and concentrated \$1.25 per unit f. o. b. Chicago.

The following table represents the prices current at this date:

Sulphate of ammonia (gas).....	\$2 30	@	2 32½
Nitrate of soda.....	1 92½	@	1 95
Blood.....	1 60	@	1 65
Hoof meal.....	1 50	@	1 55
Azotine (beef).....	1 55	@	1 60
Azotine (pork).....	1 55	@	1 60
Tankage (concentrated).....	1 50	@	1 55
Tankage (9 and 20).....	1 55	@	1 60
Tankage (7 and 30).....	15 00	@	16 00
Fish (dry).....	18 00	@	19 00
Fish (acid).....	11 00	@	12 00

Phosphate and Fertilizer Notes.

The Peace River Phosphate Mining Co. has begun shipping phosphate from its plant, near Bowling Green, Fla. The plant has been idle for over a year.

The steamship City of Belfast cleared last week from Savannah, Ga., for Stettin and St. Petersburg with 1631 tons of phosphate rock for the former port.

The tonnage tax receipts of the North Carolina State treasury show that during the five months ending April 30, 189,728 tons of commercial fertilizer were sold in

that State, this being a larger quantity than was ever before sold in a single year.

Messrs. J. M. Lang & Co. report the shipments of Florida phosphate rock for the month of April as follows: Steamship Glemmorren for Bremen with 2505 tons and the steamship City of Belfast for Stettin with 1632 tons, both by H. A. Ford, and the steamship Cento for Stettin with 1800 tons, by E. E. Abson; total for the month, 5937 tons.

The shipments of phosphate from the port of Charleston, S. C., last week to domestic ports are reported as follows: Schooner S. B. Martz for Baltimore, 800 tons of acid phosphate; schooners Warner Moore for Richmond, 675 tons, and Mary Curtis, 575 tons; schooner Mary S. Bradshaw, 505 tons, and schooner Hornatio L. Baker for Weymouth, 1129 tons. The total shipments of phosphate rock from the port of Charleston, S. C., to domestic ports from September 1, 1896, to May 1, 1897, amounted to 63,389 tons, against 77,856 tons last year.

The movement in fertilizers at all Southern points during the present season has been quite active, and at Charleston, S. C., the volume of business for the season is the largest in the history of the industry. Major E. Willis, in his review of the market, gives the following figures of the movement in that city: Shipments of fertilizers by rail and water from September 1, 1896, to March 31, 1897, amounted to 335,813 tons. For the remaining five months of the commercial year the assumed shipments are placed at 27,433 tons, making a total for the year of 363,246 tons.

Mr. K. B. Harvey, of Punta Gorda, Fla., reports the phosphate shipments from that port for the month of April as follows: Schooner Haroldine for Norfolk, Va., with 1847 tons; steamship Leonora for Newport with 3000 tons; steamship Landwood for Stettin with 3400 tons; schooner Florence for Norfolk and Richmond with 1163 tons; steamship Maria for Plymouth with 2500 tons; steamship James Turpie for Hamburg with 2272 tons, and schooner Clarence H. Venner for Norfolk and Richmond with 1243 tons, making a total of 15,425 tons, of which 4253 tons were domestic and 11,172 tons foreign. Shipments previously reported during the present year 16,948 tons domestic and 2440 tons foreign, making a grand total for four months of 34,813 tons shipped by the Peace River Phosphate Mining Co.

At the port of Fernandina, Fla., during the month of April shipments of phosphate rock have been unusually active, the total clearances for the month aggregating 22,439 tons, while vessels loading about 12,000 tons were in port on the 1st inst. The following vessels cleared during the month of April: Steamships Turret Age for Hamburg with 3289 tons; Lief Ericson for Harburg and Hamburg with 2203 tons; Lundy for Hamburg with 2378 tons; Chatburn for Stettin with 2599 tons; Elpis for Hamburg with 2043 tons; Niceto for Glasgow with 2174 tons; Byron for Rotterdam with 2256 tons; Verbena for Stettin with 3197 tons, and Linwood for Stettin with 2309 tons, making a total of 22,439 tons; previously reported 33,303 tons, making a grand total of 55,742 tons for the four months ending April 30. The steamship Ben Clune arrived on the 30th ult. for a cargo of phosphate rock; steamship Thorndale arrived on the 29th to load a cargo of phosphate rock for the Dunnellon Phosphate Co. The steamship Torpia, one of the largest vessels that ever entered the port, is now in port taking on a cargo of 5000 tons of phosphate rock for A. Newman.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, May 6.

There is no improvement in the local lumber market, and business in nearly every channel of the industry has been quiet during the past week. The weather has been unfavorable for handling lumber during the past few days, but aside from this the market is without snap or vigor. There has been a better demand for box lumber, as the packing season is now open and boxmakers are busy. The general movement in air-dried lumber is light, and low grades of yellow pine are weak as to values, with no prompt demand. A good demand for kiln-dried North Carolina pine prevails, and prices for certain grades are firmer. Stocks are generally ample for the current inquiry. In white pine transactions are light, with values firm and stocks ample for all requirements. The hardwood market shows no change and the general movement is hardly worthy of comment. The local inquiry is very light, and there is very little demand from out-of-town buyers. There is very little doing in export, and until the European markets make more favorable reports as to prices and demand shippers here are not anxious to make any new ventures. During the month of April the foreign exports of wood and its products from this port were as follows: Lumber 3,672,000 feet, logs of wood 3766, and staves 66,000.

The following list represents the prices current at this date:

[The quotations for yellow pine are for cargo lots, and for all hardwoods the figures indicate values for choice car lots.]

VIRGINIA AND NORTH CAROLINA PINE	
5-4x10 No. 2, kiln dried.....	\$12 50@ 13 50
5-4x12 No. 2, kiln dried.....	14 00@ 15 00
4-4x10 No. 1, kiln dried.....	15 00@ 15 50
4-4x12 No. 1, kiln dried.....	15 50@ 16 50
4-4 nar. edge, No. 1, kiln dried.....	13 00@ 14 00
4-4 wide edge, No. 1, kiln d'd.....	17 00@ 18 00
6-4x10 & 12, No. 1, kiln dried.....	23 00@ 24 00
4-4 No. 1 edge floor, air dried.....	13 50@ 14 50
4-4 No. 2 edge floor, air dried.....	10 50@ 11 50
4-4 No. 1 12-in. stock, air dried.....	15 50@ 16 50
4-4 No. 2 12-in. stock.....	12 50@ 13 50
4-4 edge box or rough wide.....	7 50@ 8 50
4-4 edge box do. (ord. widths).....	6 50@ 7 50
4-4 12-in. rough.....	9 00@ 10 00
3/4 narrow edge.....	5 50@ 6 50
3/4 wide.....	6 50@ 7 50
3/4x1 1/2 and 1 1/4-in.	8 50@ 9 00
Small joists, 2 1/2-12, 14 and 16 long.....	7 50@ 8 50
Large joists, 3-16 long and up.....	8 00@ 9 00
Scantling, 2x3, 2x4 and 3x4.....	7 00@ 8 00

WHITE PINE.

1st and 2d clear, 4-4, 5-4, 6-4 and 8-4.....	\$47 00@ 48 00
3d clear, 4-4, 5-4, 6-4 and 8-4.....	42 00@ 43 00
Good edge culls.....	14 50@ 15 50
Good stock.....	16 50@ 17 50

CYPRESS.

4-4x6, No. 1.....	\$19 50@ 20 50
4-4x6, No. 2.....	13 50@ 14 50
4-4x6, 16 feet, fencing.....	10 00@ 11 00
4-4x6, rough.....	8 50@ 9 00
4-4 rough edge.....	8 00@ 8 50
4-4 edge, No. 1.....	16 00@ 17 00
4-4 edge, No. 2.....	12 00@ 13 00
Gulf, 4-4, Nos. 1 and 2.....	25 00@ 26 50
Gulf, 6-4, Nos. 1 and 2.....	28 00@ 30 00

HARDWOODS—WALNUT.

5-8, Nos. 1 and 2.....	\$65 00@ 75 00
4-8, Nos. 1 and 2.....	80 00@ 90 00
5-4, 6-4 and 8-4.....	85 00@ 95 00
Newell stuff, clear of heart.....	85 00@ 100 00
Culls.....	20 00@ 30 00

OAK.

Cabinet, white and red, Southern, plain-sawn and good, 1 and 2, 8 inches and up, 12 to 16 feet long, 4-4.....	\$30 00@ 34 00
Quartered white, Western, 1 and 2 quality, all figured, 6 inches and up wide, 4-4.....	53 00@ 55 00
Culls.....	10 00@ 15 00

POPLAR.

Nos. 1 and 2, 5-8.....	\$24 50@ 25 50
Nos. 1 and 2, 4-4.....	28 00@ 30 00
Nos. 1 and 2, 6 and 8-4.....	32 50@ 33 50
Culls.....	11 50@ 12 50

SHINGLES.

Cypr., No. 1 h'ts, sawed, 6x20.....	\$6 25@ 7 00
No. 1 saps, sawed, 6x20.....	4 75@ 5 00
No. 1 hearts, shaved, 6x20.....	6 00@ 7 00
No. 1 saps, shaved, 6x20.....	4 75@ 5 00

LATHS.

White pine.....	\$1 85@ 2 00
Spruce.....	2 00@ 2 10
Cypress.....	1 50@ 1 60

Charleston.

[From our own Correspondent.]

Charleston, S. C., May 3.

The week under review has recorded only a moderate volume of trade in wood

products. A steady demand for lumber prevails, however, and the outlook for business in nearly all avenues of this industry is encouraging. At Georgetown the mills are quite busy, and have orders sufficient to keep them running for some time to come. The fine lumber plant of the Gardener & Lacey Lumber Co. has been doing some excellent work lately, and at their mill a few days ago cut 74,350 feet of cypress lumber in eleven hours, surpassing all previous records. This company is making some large shipments of lumber and shingles both by rail and water to Northern and interior points. The shipments of lumber from Smith's mills, on the Pee Dee river, have also been quite liberal during the month of April. With regard to prices there is no material change; values are still very steady and holders firm. Stocks are not accumulating, and are generally well assorted, being fully ample for the current demand. At the close of business on Saturday prices ranged as follows: Merchantable lumber \$14 to \$16 for city sawed, \$12 to \$14 for railroad; square and sound \$9 to \$13 for railroad, \$8 to \$11 for raft; dock timber \$4.50 to \$6.50, and shipping \$8.50 to \$10.50. There is a good demand for shingles at \$5 to \$7 per thousand. Among the vessels clearing with lumber cargoes during the past week the following were reported: For Boston schooners T. W. Dunn, 478,000 feet of lumber, and Albert Ames, 324,000 feet. The steamship Delaware for Boston, took out 44,000 feet of lumber among her cargo. The New York shipments were schooners Georgetta Lawrence, 240,000 feet, and Bessie Whiting, 440,000 feet. Steamer Comanche took out 41,000 feet, and Algonquin 6000 feet. The schooner J. H. Parker cleared with 424,300 feet, and Ella M. Storer, with 314,000 feet. The schooner Rillie S. Derby cleared on Saturday with 320,000 feet of lumber for Perth Amboy.

Savannah.

[From our own Correspondent.]

Savannah, Ga., May 3.

The situation here in lumber is becoming more satisfactory as the season progresses, and business for the month of April was fairly active. The prospects for the present month are good, and it is expected that some very large shipments in wood and its products will be made. There is a steady demand from the usual sources, and prices for desirable grades of lumber are firmer, with an advancing tendency. The crosstie industry is in a healthy condition at the moment, and there is an active demand from Northern railroads for the better grades of crossties. At all milling sections in the Southern part of the State there is considerable activity, and orders are coming in quite freely. Prices are quoted as follows: Ordinary sizes \$11 to \$12, difficult sizes \$13 to \$18; flooring boards \$15 to \$22; shipstuff \$16.50 to \$20, and sawn ties \$10. Among the shipments during the past week the following vessels were recorded: Barkentine Clara L. Tyler for New York, 365,491 feet of lumber; schooner Island City for Philadelphia, 250,376 feet pitch-pine lumber and 1180 crossties, measuring 303,634 feet; and schooner Adele Ball for New York, 304,882 feet. Baltimore steamers took out 202,040 feet of lumber; New York steamers, 426,930 feet; Boston steamers, 206,910 feet, and Philadelphia steamers, 122,300 feet. Lumber and timber freights are unchanged, while the offering of desirable tonnage is light. From this and nearby Georgia ports the rates are \$4 to \$4.50 for a range including Baltimore and Portland, Me. Railroad ties, basis forty-four feet, are quoted 16 cents. Steamer rates to New York and Philadelphia \$7;

to Boston, \$8, and Baltimore, \$5. Among the charters reported in New York last week were the following: Schooner Grace Bradley, 498 tons, hence to New York with lumber on private terms; schooner C. C. Wehrum, 376 tons, hence to New York with lumber at \$4.37½; a schooner 306 tons, hence to Baltimore with dry cypress at \$4.

Brunswick.

[From our own Correspondent.]

Brunswick, Ga., May 3.

That a more than usual movement is in progress at several of the Georgia ports is confirmed by the shipping record of this port for the month of April. During the month eleven steamers, sixteen barks and thirty-three schooners entered and cleared from the port of Brunswick, taking out merchandise valued at \$1,508,389, against \$707,980 for the month of April, 1896. This showing for the general trade of a port that has met with so many reverses during the past five years is indeed remarkable, and the conclusion to be arrived at is that all conditions in the commercial and industrial channels of this port were never in better condition. Of the trade of the port for the past month the lumber interests have shown up better than usual. The greatest activity has prevailed among the mills here, while the demand for lumber has been good, especially from foreign sources, where a most lucrative trade has been cultivated by Brunswick shippers. While all wood products are in good demand, the crosstie industry seems to have attained huge proportions, having grown steadily until we have a shipping record for the month of April aggregating 203,577 crossties cleared for domestic ports. The total shipments of lumber for the month of April amounted to 11,826,000 superficial feet, of which 3,387,000 feet were foreign and 8,439,000 feet domestic. Of timber 410,000 feet were exported, and of shingles 996,550. At the moment there is an active demand for all desirable grades of lumber and timber, and prices rule very firm, with holders quite decided in their views and unwilling to make concessions in any case. The outlook for the present month is encouraging, and a number of vessels are now under charter to load for domestic and foreign ports. Among the charters reported in New York last week were the following: Schooner Mary F. Godfrey, 424 tons, hence to Wilmington, Del., with oak crossties at 18½ cents and free wharfage, coal out from Philadelphia at 75 cents, and schooner Normandy, 433 tons, hence to Philadelphia with crossties at 14 cents, and three schooners from Fernandina to New York with lumber at \$4.37½.

Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., May 1.

The general shipping record for the month of April at this port, as reported by the collector of customs, has been a fairly active one, and in lumber the movement has been more pronounced than in the month of March. All branches of the lumber trade have shown a better volume of business, and the demand for desirable lumber is improving. Saw mills, both here and at adjacent points, have been extremely busy during April, and are well supplied with orders for the present month. The principal exports of wood products to coastwise ports during April are given as follows: Yellow-pine lumber 9,039,000 feet, cypress lumber 325,000 feet, shingles in bulk 725,000, crossties 40,087 and vegetable crates 3300. The foreign shipments of lumber amounted to 333,068 feet of yellow pine. The charters reported for the current month indicate a large volume of trade in lumber, and today there is considerable activity

among shippers. The schooner Job H. Jackson cleared for New York with 425,000 feet of yellow-pine lumber, and the schooner D. W. Anthony for Bath, Me., with 350,000 feet. The Clyde Line steamer Seminole cleared for New York today with 200,000 feet of lumber, 2000 crossties and 500 bundles of shingles, and the Iroquois with 250,000 feet of lumber, 4000 crossties and 3000 bundles of shingles. The George W. Clyde cleared for Boston with 200,000 feet of lumber and 1000 bundles of shingles. The schooner Mary L. Crosby, 463 tons, is chartered to load lumber at this port for New York at \$4.50, option of the sound at \$4.62½.

Mobile.

[From our own Correspondent.]

Mobile, Ala., May 3.

The lumber and timber market at this port has been unusually active during the past week, and the demand for the best grades of manufactured material is steady. Timber is moving very freely, but prices are down very low and are quite unsatisfactory to the manufacturer. There is a fair demand for both hewn and sawn timber, and prices remain as previously quoted—11½ to 12 cents for sawn and 12 to 12½ cents for hewn. In lumber there has been considerable activity, and mills at all points adjacent to this city are well supplied with orders. Trade with Cuba is good, and with South America business is beginning to improve. During the past week the following clearances were reported: Ship Norveg for Plymouth, England, with 67,561 cubic feet of sawn timber, 20,172 cubic feet of hewn timber and 21,981 superficial feet of lumber; ship Steinvora for Liverpool with 59,753 cubic feet of hewn timber, 9723 cubic feet of sawn timber and 32,427 feet of lumber; bark Nimrod for Nienport, Belgium, with 62,028 cubic feet of sawn timber and 287,599 feet of lumber; bark Folkvang for London with 25,075 cubic feet of hewn timber, 64,865 feet of sawn timber and 25,110 feet of lumber; the bark Fram cleared for Rosario with 550,484 feet of lumber; schooner Penobscot for Ponce, P. R., with 209,585 feet; schooner Iolanthe for Cienfuegos, Cuba, with 360,000 feet; steamer Managua for Belize, B. H., with 34,964 feet; schooner James Baird for Key West with 214,609 feet, and steamer John Wilson for Boca del Toro with 3825 feet. In Pensacola the lumber and timber business has been more active than usual during the past week. Sawn timber is quoted at 10 to 10½ cents, with a fair demand. Hewn timber is in light supply, and is quoted at 11 cents. The following charters were reported in New York last week: Austrian steamer Lonaconing, 1347 tons, from Pensacola to Trieste with lumber on private terms; British steamer Robert Adamson, 1936 tons, from Pensacola to two French ports with timber on private terms; steamer Asphodel, 1730 tons, from Pensacola to the United Kingdom or Continent with timber on private terms; a bark, 812 tons, from Pascagoula to Buenos Ayres with lumber at \$12, to Rosario \$13, and schooner B. R. Woodside from Pascagoula to New York at \$5.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, May 1.

The discouraging condition of low prices, accompanied by an eagerness on the part of manufacturers to shove their product on the market, continues, and holds prices at their present low basis. The stocks at all the mill-yards are pretty well broken, and the same state prevails at most of the retail yards throughout the State. This would normally tend to raise prices were it not for the general scramble to sell evinced by millmen in general.

There has been a very fair demand for the month just past from the interior, and the business shows a marked improvement over the same period last year. The rail shipments for April, '97, were 1560 cars, which is an increase of 22 per cent. over April, '96, which showed a total of 1276 cars. The shingle market continues very quiet. An era of low prices has settled upon this product, and shingle mills have been running very irregularly.

The export trade, though at present dull, shows signs of an improvement. The mills at this point and Orange have been receiving numerous inquiries, which are bringing in new items for the order-books.

The Reliance Lumber Co. received during the week an order for about half a million feet, which will be shipped to London. Litcher & Moore, of Orange, have confirmed several new bills during the week, among them an order for Genoa, Italy, also one for France. The Orange mills have been sawing a good quantity of export material for German and French markets, and, in addition, are getting a fair share of Spanish-American and West Indian orders.

The steamship Jeanara arrived at Sabine Pass last Wednesday, and is now being loaded by Martin Taylor & Co. for the United Kingdom. Her cargo will consist of 2,500,000 feet of deals and timbers.

Lumber Notes.

The Louisiana & Gulf Lumber Co., of Kansas City, Mo., filed last week a petition for an increase of capital stock from \$5000 to \$15,000.

The saw mill of the original Freeman Lumber Co., at Decatur, Ala., which has been idle for several months, resumed operations last week.

The Biloxi Lumber & Export Co., at Biloxi, Miss., has completed its saw mill on the Gulf & Ship Island Railroad. It has a capacity of 50,000 feet a day.

During the month of April there was shipped from Darien, Ga., coastwise and foreign, 10,610,773 feet of hewn and sawn timber and lumber, valued at \$112,541.

The Griffin Lumber Co. will soon build a small steamer to ply on the Coosa river between Gadsden and Greensport, Ala. The boat will be used to tow logs to the mills.

The exports of wood and its products from the port of Baltimore for the month of April aggregated 3,672,000 feet of lumber, 66,000 staves and 3766 logs of wood.

The Buell Planing Mill Co., of Dallas, Texas, was chartered last week, with a capital stock of \$15,000. The incorporators are Frank L. Buell, Patrick J. Connelly and J. E. De Witt, all of Dallas.

The Litcher & Moore Lumber Co., of Orange, Texas, has accepted an order from Genoa, Italy, for a large bill of yellow-pine lumber. It also has an order for material to be shipped to a French port.

The shipments of wood and its products last week from the port of Pensacola amounted to 8,620,000 feet of sawn timber, 3,200,000 feet of lumber, 2688 cubic feet of oak timber and 152 cubic feet of cedar.

The Slane planing-mill buildings, at Huntsville, Ala., owned by James A. Ward, were destroyed by fire on the 1st inst. There was a partial insurance on the machinery and tools, but none on the buildings.

Mr. A. Bergland, of Chicago, visited Vicksburg, Miss., last week and was so much interested in South Vicksburg that it is his intention to establish a large woodenware factory at that point, pro-

vided he can obtain reasonable freight rates.

There are ten saw mills in Apalachicola, Fla., which ship their product, by vessel both to domestic and foreign ports. The combined capacity of these mills is 600,000 feet of lumber a day. The shingle capacity is 300,000 a day.

The large saw mill of Frank Rigglesberger at Paducah, Ky., was destroyed by fire on the 30th ult. The planing mill and a large quantity of lumber was also destroyed. The loss is estimated at \$35,000, with only a partial insurance.

The saw mill of Leon Bros., located at Deer Park, Ala., on the Mobile & Ohio Railroad, was destroyed by fire on the 30th inst., together with four cars of lumber, entailing a loss of \$3000, on which it is reported there was no insurance.

Messrs. R. M. Thompson & Sons, at Monrovia, Ala., who have for several years been engaged in the manufacture of washboards, have added new machinery to their present plant and are now turning out plows, harrows and other agricultural implements.

Among the shipments from Fernandina, Fla., last week were the following: Schooner Rhode Island for New York with a cargo of 11,400 crossties for N. Emanuel & Co., and the schooner Harold J. McArthy with 240,000 feet of lumber for the Drew Lumber Co.

On the 3d inst. J. Caldwell, of Huntingdon, W. Va., sold to the Ironton Crosstie Co. about 2000 acres of timber lands on Six-mile creek, in Lincoln county. This company will put two large saw mills in operation, and a number of hands will be employed in getting out crossties.

It is stated that Spofford Bros., of Oakland, O., have bought a large tract of timber land near Weston, W. Va., and have prepared the plans for a big factory. The timber tracts included about 10,000,000 feet of hardwood lumber, suitable for the product to be manufactured.

The new building of the Eastman Sash, Door & Lumber Co., of Eastman, Ga., was destroyed by fire on the 2d inst. There was no insurance on the building, and the total loss is \$2500. The building will be rebuilt immediately, and the company expects to resume work in the course of thirty days.

A petition for a new charter for the Gress Lumber Co., located at Kramer, Ga., has been applied for in consequence of a change in ownership. A. V. Gress retires, and the petitioners for new charter are Morgan V. Gress, J. H. Gress and Maria Gress. The plant is one of the largest in Wilcox county.

Commodore A. L. Lowe, of Galveston, Texas, is actively engaged in organizing an expedition of traveling men to Central America for the purpose of opening up and extending the trade relations of Texas with that country. The millmen of Beaumont, Orange and other lumber sections are included in the list.

Among the clearances from the port of Brunswick, Ga., last week the following vessels were reported: Bark Finland for Bilboa with 405,000 feet of lumber; bark King's County for Hamburg with 654,000 feet; schooner John Paul for Philadelphia with 340,000 feet of lumber, and the schooner Norman for Boston with 315,000 feet of cypress and pine lumber.

It is stated that the Reliance Lumber Co., of Beaumont, Texas, shipped during the month of April on account of the big railroad order recently filed, 7,500,000 feet cut by all the mills sawing on this order. In addition to this, these mills sawed perhaps as much as 30,000,000 feet of lumber which went towards completing other orders. This is said to be the larg-

est month's business in the history of the Reliance Lumber Co.

The Calcasieu Export Lumber Co., of Lake Charles, La., has contracted for exporting 6,000,000 feet of lumber this year, all to European ports. The company has chartered the ship Leonora and bark Orjon, and will load them at Sabine Pass. Three more ships will be chartered in a few days. The barging of lumber down the Calcasieu river and around to Sabine Pass will begin at once.

At the annual meeting of the stockholders of the F. G. Oxley Stave Co., of Chattanooga, Tenn., held in New York last week, the sale of the various plants of the company was confirmed. Colonel Oxley, the purchaser, has signed a contract with Standard Oil Co. to furnish them with staves for four years. It is stated that Colonel Oxley will build a new stave factory at Marsh Switch, Ky., on the Cincinnati Southern Railroad. The plant will have a capacity of 15,000 staves a day.

A meeting of the creditors of the Southern States Lumber & Timber Co., Limited, who have been allowed a preference out of a portion of the unincumbered assets of the company, was held in Mobile, Ala., on the 27th ult. After a session of several hours and a full discussion of the situation arrangements were made by which the creditors present will probably become bidders upon the plant on the day of sale. The lands and mills are to be sold in bulk, but the personal property, amounting to nearly \$200,000 in value, is to be sold in lots.

Iron Markets.

New York, May 4.

Waiting expresses the situation in a nutshell. So far as reported, no important contracts have been closed for some time, although it is expected that specifications for considerable architectural and other work will be put out in the near future. Apparently there is a disposition on the part of large consumers to wait for a possible break and then rush in with orders. In any event, it would seem as if the summer months will see the mills crowded with work.

Prices f. o. b. New York:

No. 1 X standard Alabama...	@ \$11 25
No. 2 X standard Alabama...	@ 10 50
No. 1 X lake ore coke iron...	@ 12 90
No. 2 X lake ore coke iron...	@ 12 40
Niagara coke malleable...	@ 13 25
Standard Georgia charcoal...	@ 16 50

Philadelphia, May 4.

Very dull continues the state of the market in this vicinity, Philadelphia practically reflecting the conditions existing at other centres of the trade. It is hard to find a concern that has any orders which might be termed sizeable. It is possible that buyers may make a move this month, but this is still in doubt. They are buying on the hand-to-mouth principle.

Prices f. o. b. Philadelphia docks:

No. 1 X standard Alabama...	@ \$11 25
No. 2 X standard Alabama...	@ 10 50
No. 1 X lake ore iron...	@ 12 90
No. 2 X lake ore iron...	@ 12 40
Niagara low sulphur coke malleable...	@ 13 25
Georgia warm-blast C. C. for car-wheels, chilled and sand rolls...	@ 16 50

Cincinnati, O., May 4.

The reduction in rates by the Southern transportation lines to meet the Northwestern metal producers continues to be the principal topic of conversation in iron circles. It is believed that this will stimulate buying of Southern iron in quantities, and that the market generally will be much benefited by the stroke. Many in a position to be well informed are of the opinion that the cut in rates is to be a knock-out blow, in this market at least, to Northern iron.

Prices f. o. b. Cincinnati:

Southern coke No. 1.....	\$9 25 @ \$9 50
Southern coke No. 2.....	8 75 @ 9 00
Southern coke No. 3.....	8 25 @ 8 50
Southern coke No. 1 soft.....	8 75 @ 9 25

Southern coke No. 2 soft....	8 75 @ 9 00
Southern coke, gray forge....	8 00 @ 8 25
Southern coke, mottled forge....	8 00 @ 8 25
Ohio silvery No. 1.....	13 00 @ 13 50
Ohio silvery No. 2.....	12 00 @ 12 50
Lake Superior coke No. 1.....	12 00 @ 12 25
Lake Superior coke No. 2.....	11 00 @ 11 50
Tennessee charcoal No. 1.....	13 00 @ 13 25
Tennessee charcoal No. 2.....	12 00 @ 12 25

POPULAR WITH THE PEOPLE.

Advancement Made by a Baltimore Surety Company.

The first day of June is the birthday of the Fidelity & Deposit Co. of Maryland. Seven years ago Mr. Edwin Warfield, who was at that time surveyor of the port of Baltimore, conceived the idea of forming a company for the purpose of qualifying as surety upon bonds required of those occupying positions of trust and those required for the faithful completion of contracts. He was led to the belief that a corporation of this character would make a financial success from the fact that he had noticed how difficult it was for many of the employes of the Baltimore Custom-house to obtain bondsmen, notwithstanding the fact that they were perfectly reliable men.

Mr. Warfield, being a lawyer by profession, in the early days of his practice, had frequently seen where young attorneys could have secured the appointment of trustee, administrator or other position of trust had they been able to furnish bond, but, not having friends who were in a position to qualify for them, although gentlemen of the very highest integrity and standing in the community, were compelled to decline the appointment.

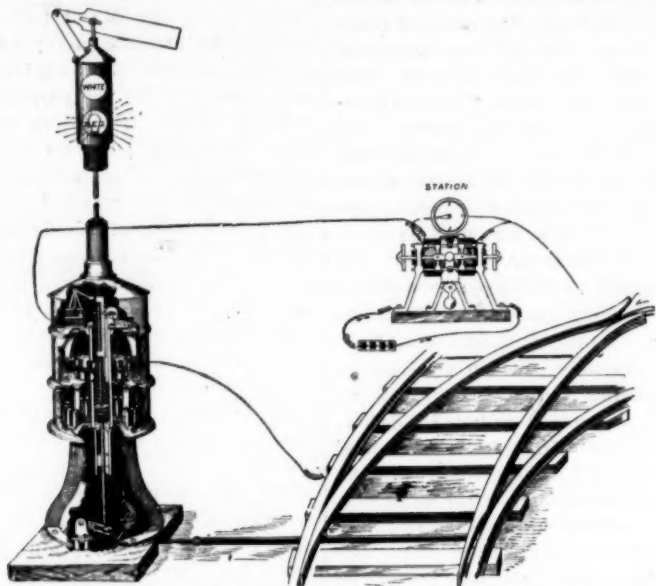
Imbued with the belief of the success of a company that would become surety for any honest man, irrespective of his financial condition, Mr. Warfield started out to organize the Fidelity & Deposit Co. of Maryland. Had he not been possessed of the greatest amount of pluck, he would have given up the job shortly after he began to approach his friends in regard to subscribing for the stock. They treated his request good naturedly, but thought his idea was chimerical; in fact, some of them almost ridiculed it. This simply increased Mr. Warfield's determination to make a success of the enterprise, and by dint of extraordinary perseverance he succeeded in securing contributions for \$500,000 of the stock, and the company was started upon its career on June 1, 1890, in a little room at No. 7 North Calvert street.

It was not long before the people in Maryland, as well as the entire South, recognized the value of corporate surety, and the result was success for the company. In the seven years which have passed the Fidelity & Deposit Co. of Maryland has reached almost gigantic proportions. It is today the strongest surety company in existence. It has a paid-up capital of \$1,000,000 and a surplus and reserve of \$1,300,000, making its total cash assets \$2,300,000, to which could be added, if necessary, another \$1,000,000 of additional stockholders' liability, which would make the total resources of the company \$3,300,000. It has branch offices in every prominent city in the United States, and it is accepted as sole surety on bonds of every description by every State in the Union, as well as by the United States government. It has arrangements by which its bonds can be executed upon application for same in any city from San Francisco to Maine. Its building, at the northwest corner of Charles and Lexington streets, is one of the city's monuments, and is pointed out to all strangers visiting Baltimore. Mr. Warfield continues as president of the company, the other officers being: Vice-presidents, H. Crawford Black, Joseph R. Stonebraker and Henry B. Platt; secretary and treasurer, Herman E. Bosler.

MECHANICAL.

Electric Self-Locking Switch and Signal Apparatus.

A notable invention is presented herewith in an electric apparatus for operating railroad switches and signals from a point distant from the location of same. Its chief value lies in its positive action and the facility with which it can be worked in a complete system of switches and signals, also making block-signal sys-



ELECTRIC SELF-LOCKING SWITCH AND SIGNAL APPARATUS.

tems efficient and economical. That it is self-locking will be apparent from its construction, thus dispensing with the interlocking devices.

The switch rod is operated by a bell crank, or its mechanical equivalent, the horizontal arm of which engages an upright rod extending to the signal light and semaphore, which it operates, its motion being perpendicular only. This motion is effected by an electric motor fastened to a sleeve, the inside of which is threaded, and revolving about the

line wire, the lower disc having in contact with it a brush in contact with the ground wire.

Stationary on the rod and above the screw is placed a rack operating a gear wheel, the circumference of which is equal to the motion of the perpendicular rod up or down. Its shaft carries a crank which operates a pitman, whose far end moves a sliding head housed in a standard in contact with a line wire. Back of this "sliding head standard" is another standard, which is in connection

described above, the armature falls back, impelled by a weighted segment, the movement of which throws the instrument out of contact, in which position it remains until the current is again turned on by the operator. This falling back of the armature is a guarantee that the operation at the switch has been completed.

This motion also records the position of the switch at the track by simply recording on a dial, in figures, the last direction of the current. For switching purposes the motor, commutator and cut-off may be placed horizontally between the tracks and screw-rod directly operating the switch-rod.

For information and particulars Chas. G. Smith, 123 Water street, Pittsburg, Pa., can be addressed.

Automatic Circuit Breakers

Fuse wire has proved so unreliable to all users and electrical engineers as a safety device for protection from short circuits, overloads or grounds, and offering no protection from lightning storms whatever, that the electrical public has turned its attention to the use of automatic magnetic circuit breakers as a reliable substitute for fuse wire.

We illustrate the well-known automatic circuit breakers or limit switches made by the Automatic Circuit Breaker Co., Newaygo, Mich., with their latest improvements. Cut 1 shows circuit breaker closed, Cut 2 circuit breaker open, or as it appears after circuit is broken, Cut 3 sectional view, showing on a line drawn through centre of instrument.

Y represents base, either marble, slate or other suitable material, preferably slate; A, copper contact; B and B', carbons upon which they make their final break; C, dash pot that gives break frame; R, its sudden blow through handle V, which has about one-eighth of an inch play, as shown at L, so that it gives break frame a hammer blow, overcoming any possible chances for contacts R and A sticking; D, latch; E, small weight to

blows. M is the graduation plate, graduations on their instruments being in amperes; N, adjusting screw for adjusting capacity, either increasing or decreasing to any predetermined point between the minimum and maximum graduations. The company has displaced all springs and intricate parts by a new and novel use of magnetism, being points F and G, which is always positive and never varying in principle or operation.

The company makes a positive guarantee that its instruments will operate within 1 per cent. of their set capacity under any and all circumstances. It has them in use successfully on all systems and all voltages.

Electricity vs. Steam.

A line of experiment track has been built by the General Electric Company between the works at Schenectady and the Erie Canal. It has been laid upon the heel path, is 6700 feet long, and is of the regulation New York Central Railroad construction, the service rails being standard rails, eighty-five pounds to the yard. It is upon this track that almost daily equipments are tried under different steam-road conditions and bursts of speed made and efficiencies recorded of a more than encouraging nature.

The experiments made so far have been carried on for the purpose of developing motors and systems of operation for elevated and surface steam roads. For locomotive a special eight-wheeled car is used. This resembles a regular passenger coach so constructed as to give an unobstructed access to the two motor trucks. The weight of this coach-locomotive equipped is about thirty tons, empty. It is divided into three sections—a driving and testing department, in front; a passenger division, in the centre, and a rear compartment, in which are carried the air-pump, tools, etc.

The equipment of the forward compartment consists of a skeleton wooden switchboard, carrying the ammeters, volt-

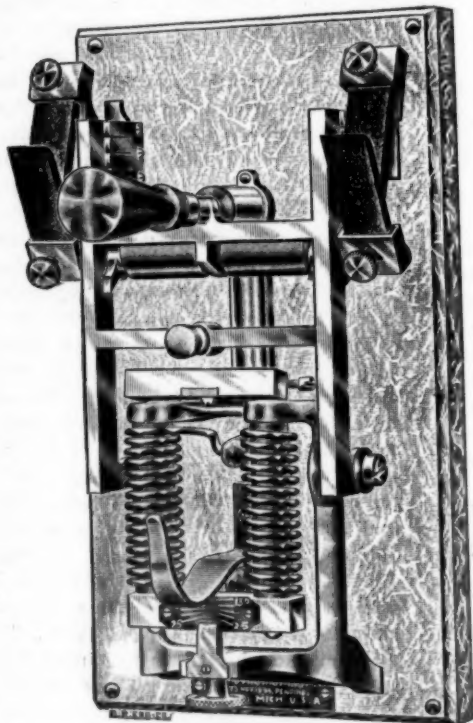


FIG. 1.

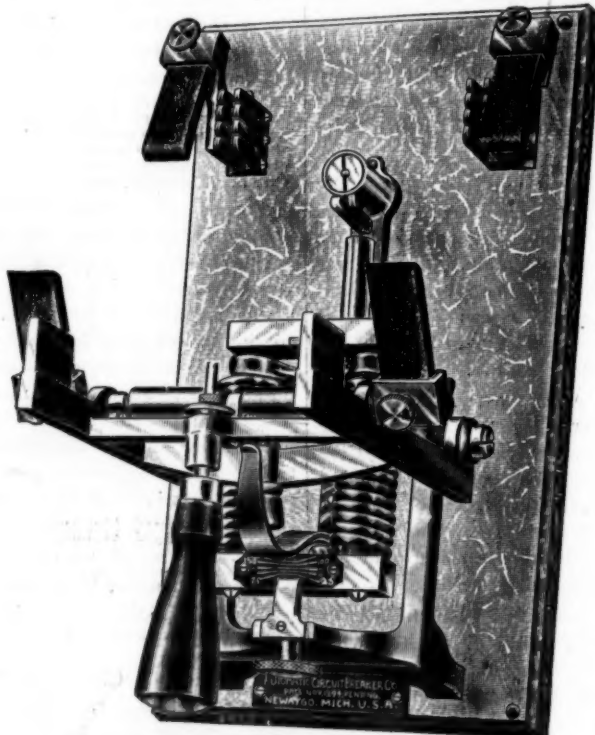


FIG. 2.

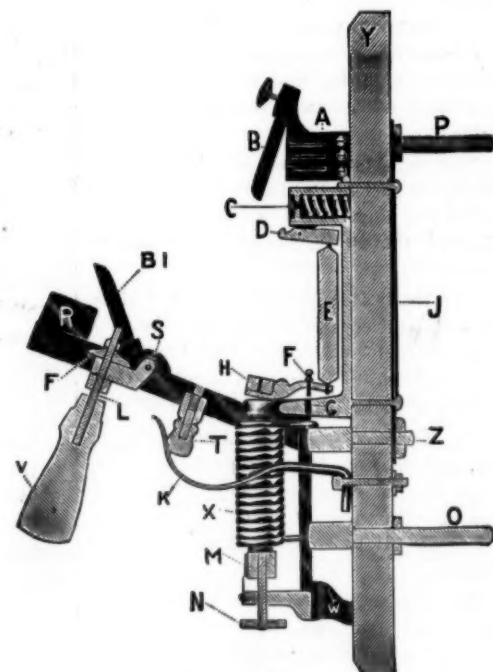


FIG. 3.

screw upon the perpendicular rod, thus securing a powerful and simple motion, which of itself produces a positive lock. Above the motor, fastened to the sleeve, is a commutator, consisting of two metallic discs, insulated apart, having radiating and insulated extensions, the outer edges of which are in contact with brushes conveying the current to and from the motor, the upper disc being in continuous contact with a brush communicating with a cut-off, in contact with a

Repetition of the motion is prevented by an instrument in the office or tower from where the motor is operated. This instrument consists of an electro-magnet, excited by the same current and in the same direction as those in the motor at the switch. At each end of this magnet is an armature, either one of which (depending upon the direction the switch is to be thrown) is held against the core as long as the current is continued, but when interrupted by the cut-off (at the track)

return armature to place after instrument has operated; F, screw through armature holder, making contact on point shown at G, which is a piece of iron running to magnet core and is magnetized so that it holds armature up until current exceeds the predetermined point. Then magnet G releases screw F, giving a hammer blow to E against latch D, and releases disk F, which is the catch on frame R, and a part of handle V, all movements being positive knock-out

meters, wattmeters, etc., to enable the engineer to gage exactly and record the performance of the specific motor equipment which may be under experiment at any stated time. In addition, the switchboard is fitted with the necessary quick-break switches, magnetic blow-out, fuse boxes, automatic circuit-breakers, etc. The controller is set in front of the right forward front window, through which the driving engineer has an unobstructed view of the track in front of him. To his

right is the valve handle of the air brake, and in front of him is an operating ammeter gaging the current output. The resistances are suspended from beneath the central compartment.

In one of the tests the equipment of the car consisted of four General Electric

soon as the pressure rises to normal the piston is forced back, the circuit is broken and the motor stops, any arc at the point of rupture of contact being immediately extinguished in the magnetic field of the blow-out device.

In the first test made with the motor

factory without shaking the building.

The upper part of strain consists of a differential traversing pulley, in connection with a leaf spring, which gives an even tension and does away with all friction and slides. Adjustable slides below the table are of the best gun metal, with self-oiling globes, and the cross-head, which works in same, is of solid forged steel. Changing from inside to outside work, it is claimed, can be more quickly done than on any other strained or unstrained saw. The operator passes the end of the saw through the table until it strikes a steel plate, whence it slides into the cross-head. It is said to be impossible for the saw to miss catching, and requires no screw to hold it.

The machine has a patent brake and shifter combined, the brake raising, as if on a screw and applying its full face to the crank-wheel, instantly stopping the machine. There are in use machines where the base or column is all right, but better results could be obtained, it is claimed, by adopting this strain. It can be furnished, that is, all above the table, and it is very readily fitted to other machines.

The tight and loose pulleys are 6x3-inch face, and should make 1300 to 1400 revolutions per minute. The Egan Co., 228-248 West Front street, Cincinnati, Ohio, is the maker.

Cazin Water and Steam Wheel.

The subject of the utilization of water-power, which is becoming of such impor-

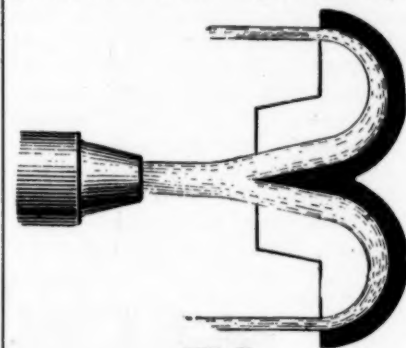


FIG. 2.

in order to obtain the best results in transmitting the inherent power of the jet. It is unnecessary to quote authorities in support of this theorem, but it is of interest to note the claims of this new wheel company in complying therewith. The accompanying cuts more clearly than verbal explanations indicate the basis for the assertion that the wheel actually performs the work theoretically required.

Fig. 1 gives a front view of pair of buckets in which the curves of the re-

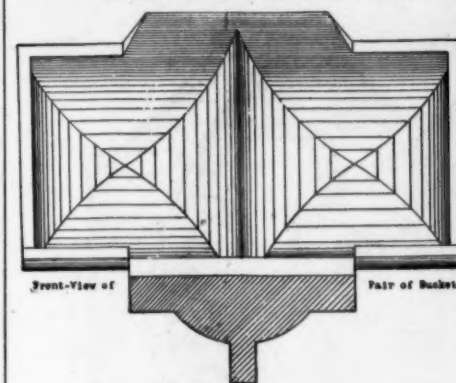


FIG. 1.

ceiving lip and vanes are indicated by the shaded lines.

Figs. 2, 3 and 4 show sections of the vanes showing not only the true curves, but also the course of the jet in contact therewith.

Fig. 5 shows the positions of the vanes on the wheel crown and also the diagonal nozzle tip intended to provide against loss of power between the time the jet leaves the nozzle and contact with the buckets.

These cuts show the pertinent facts of the merits of the device, and it is claimed that the jet is not only inverted while the bucket is in its best position relative

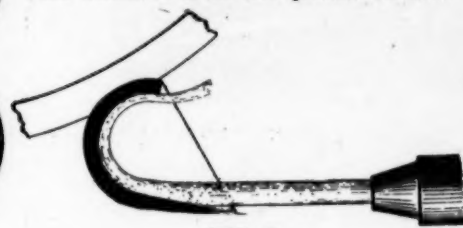


FIG. 3.

tance, and which might be said to be still in its infancy, so far as this country is concerned, receives additional and interesting presentation through a pamphlet just distributed among civil, mechanical and electrical engineers generally throughout the United States by the American Impulse Wheel Co., of New York.

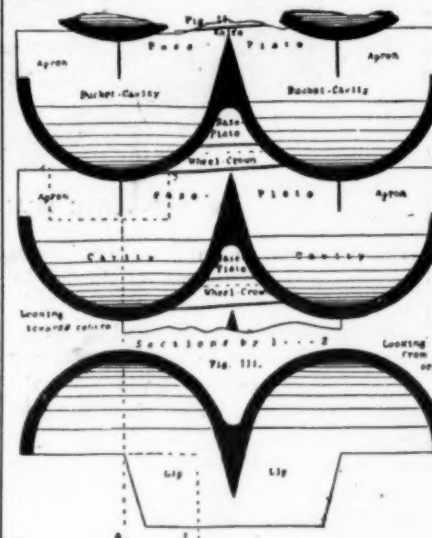


FIG. 4.

to the jet, but also completely and permanently in all positions taken by the bucket while receiving the jet impact, which is presented as a necessary addition to highest efficiency. In addition to this, the book contains considerable information relating to power calculations, hydraulics, water rights and other matters, part of which has appeared in the

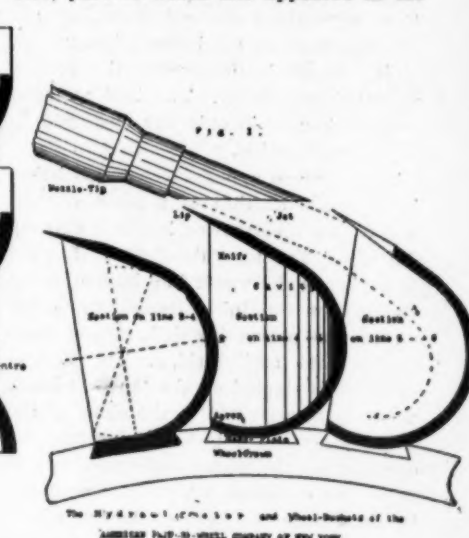


FIG. 5.

The invention described in the publication referred to is a wheel of the free jet or percussion type, operated by either steam or water.

It is an established fact in hydraulics that the jet of water must be completely inverted by the vane or bucket of a wheel, traveling at half the velocity of the jet,

Journal of the Franklin Institute and various engineering publications. The invention is covered by patent rights issued to F. M. F. Cazin, inventor, and is offered for sale by the American Impulse Wheel Co., 120-122 Liberty street, New York, from whom copies of the book can be secured.



NO. 2 PATENT SCROLL SAW.

2000 motors, each motor being rated at about 125 horse-power, one motor to each axle, motion being communicated to the wheels through steel gear and pinion. The forward truck was equipped with a special speed recorder. The controller used was a K 16 series parallel controller.

From beneath the bolster of each truck, set between the wheels on the conductor rails' side, projects a heavy oaken beam, to which is suspended the contact shoe, by means of which the current is brought from rails to motors. This shoe is a flat piece of cast iron, with the ends slightly curved. It is fastened by two loose links to an iron casting bolted to the oak beam. This method of suspension keeps the shoe continuously in contact with the surface of the conductor rail, as it allows it to conform immediately to any inequalities which may occur in the latter.

The air for the brakes and whistle, one of which is set at each end of the car, is furnished by a vertical direct-connected air pump, operated by a motor controlled automatically. This automatic action is brought about by the balancing of the pressure in the air tanks against the power of a spiral spring. The spring is coiled in a cylinder furnished with a piston, the upper end of which is a switch in a magnetic blow-out device. As soon as the pressure in the main tank falls below the desired pounds per square inch the spring forces up the piston until its upper end is in contact at the switch. Contact being made, the motor circuit is closed and the air-pump motor starts. As

equipment, the total draw-bar pull of which is about 15,000 pounds, three flat New York Central and one flat Lake Shore freight cars, each loaded with pigs of iron, were hauled. This load, about 121 tons dead weight, was easily handled by the locomotive, and the records as to speed and power required showed most gratifying results. The flat cars were then switched back into the works.

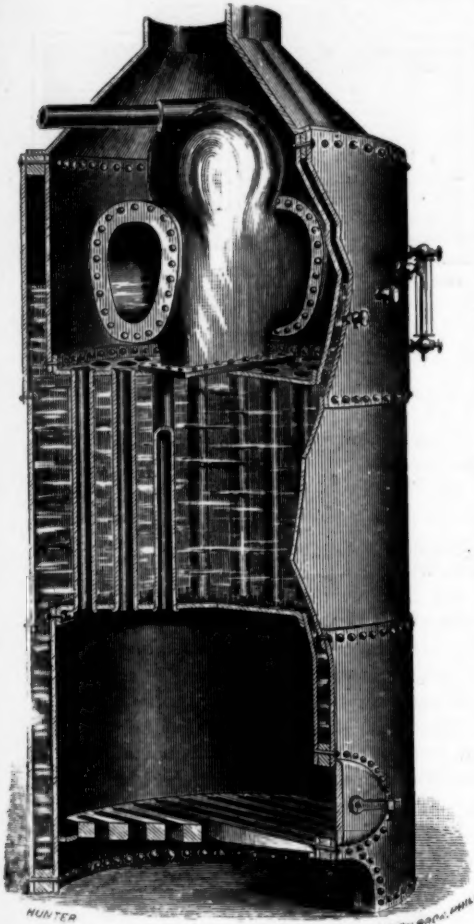
The locomotive was then coupled to four New York Central standard passenger coaches, making, with the motor car, a train of 130 tons. The controller was in charge of Chief Engineer W. B. Potter, and S. H. Libby acted as conductor. Several interesting runs were made with this train up and down the track, with equally encouraging results.

Patent Scroll Saw.

The No. 2 scroll saw of the Egan Co., of Cincinnati, O., is recognized as a standard, and possesses many points of excellence. It has met with a wide sale because of the large amount of work it will do. By making continued improvements as experience suggested, and, above all, by using good material, and doing good work in a perfect and thorough manner, the manufacturer is able to give a machine for simplicity, durability and fast cutting. The absence of friction on the strain and the lightness of cross-head produces no perceptible jar, even when running at the enormous speed of 1600 revolutions per minute. It can be run in second and third stories of any

Kriebel Patent Vertical Boiler.

Considerable attention has been attracted among engineers by the high character of the service given by the Kriebel boiler. A large number of these boilers are now in use in various sections of the country, and from thorough tests made their efficiency has been fully demonstrated. They have shown an evaporating capacity of over nine pounds of water to one pound of combustible under ordinary circum-



KRIEBEL PATENT VERTICAL BOILER.

stances. Users say that the best possible steam, dry and elastic, is furnished, so that great economy is secured. The Kriebel boiler, with submerged tubes and super-heating chamber, has become widely popular because of these advantages.

They are built and furnished with an independent base, or with the shell and fire-box sheet extended below the grate, forming the ash-pit. These boilers are not designed or built as low-priced boilers, but with the purpose of producing the best at a reasonable price. Those who have used them contend that they are the cheapest of all boilers, because of their economy in the consumption of fuel and their durability. The best material and workmanship only are employed in their construction.

The outward appearance of this boiler is the same as that of a plain vertical boiler. Its construction inside is entirely different. The top tube-sheet is dropped down below the water line in the boiler; this places the tubes completely under water, thus preventing their getting loose in the head and leaking. The steam-chamber is riveted on the top tube-head, which is also riveted to the sides of the steam space of the boiler, giving free circulation for the water and steam to and from this chamber, which is surrounded by the flames and heat of the fire which rises through the tubes from the furnace below, and to a large degree superheat the steam, making dry steam. A desirable feature is the attachment of the steam pipe to the top of the chamber at the point farthest from the water and in the centre of the boiler. The sheet which supports the top tube-sheet or head is parallel with the outside or shell of the boiler. This arrangement obviates the danger of overheating the sheets and blis-

tering them from the heat of the flames. Tubes are of sufficient number to secure a large heating surface; in the arrangement of the tubes, water space around the furnace, steam space around the combustion chamber, and the steam chamber in the combustion chamber, is made for the purpose of obtaining perfect circulation of the heated water in the boiler. In the accompanying illustration a sectional view of the Kriebel vertical steam boiler is given, with water leg extended below grate, thus forming the ash-pit.

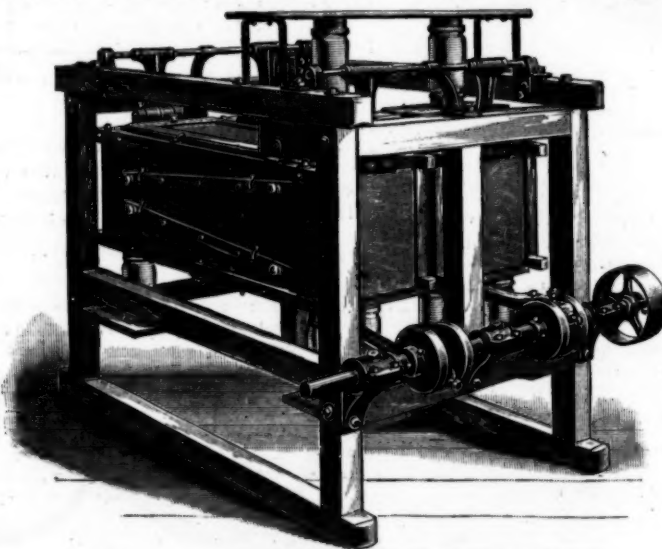
The Globe Steam Heater Co., North Wales, Pa., is the manufacturer.

Muncy Sieve Scalper and Grader.

It is of great interest in these days to note the gradual adoption among millers of the sieve method of scalping and grading. From the fact that mill builders are so generally devoting much thought and attention to the evolution of such machines, too, it would seem as if the "coming" plan of scalping and grading had about arrived. That there has been room for improvement in appliances must be admitted when it is remembered that the wider application of the method is practically new. The latest competitor in the field of such devices, the Muncy vibrating sieve scalper and grader, has just appeared to engage the attention of millers, and from all reports it is decidedly in the line of progress toward the accomplishment of exact and scientific milling.

The principle which the builders had in mind was the familiar one involved in the molder sifting sand with a hand sieve, and to accomplish this they have adopted an exceedingly simple and ingenious arrangement. The motion which it imparts to the stock is a sort of up-and-down and sidewise effect, and the results accomplished are pronounced by old and experienced millers as simply marvelous.

Of course, it will be impossible to give a satisfactory idea of its working from a



MUNCY SIEVE SCALPER AND GRADER.

printed description, but a few outlines of its merit and advantages, as claimed by the manufacturers, may be presented. In space the vibrating scalper and grader occupies less room than an ordinary reel; in capacity it will do the work of four reels and saves the heavy expense of extra elevators and conveyors, to say nothing of injury to the stock in all those extra conveyors and by much handling. The sieves are in plain sight, and can be changed or moved by simply turning two thumb nuts which hold them in place. Unlike some machines of this class, the Muncy does not need a cloth-cleaning device to wear out the silk quickly; its cloth, it is claimed, is always kept clean by the peculiar vibrating motion of the machine.

The Muncy is made in two parts, driven by crankshaft, as shown in the cut, and as one part perfectly counterbalances the

other, the vibration which might be imparted to the building, it is said, is not perceptible to the slightest degree. All its bearings are long and heavy, insuring strength and durability, while the general construction of the machine is of high order. One of the best things about the whole combination, and the one, perhaps, that will attract the millers' attention after it is seen in motion, is the easy accessibility of all parts. There is no difficulty about getting at anything, and those who are now using the machine are enthusiastic in their commendation of this feature.

Sprout, Waldron & Co., Muncy, Pa., are the builders of the machine.

Asbestos.

The trade-mark, "Asbestos," as illustrated; the address, 87 Maiden Lane, and the name, H. W. Johns Manufacturing Co., have been so long associated that the mention of one immediately suggests the other two to those who have been served by the varied manufactures of this company. The offices at 87 Maiden Lane were established twenty-five years ago, and it is, therefore, after long hesitation that a change in address has been decided upon. Department has been added to depart-

ASBESTOS.

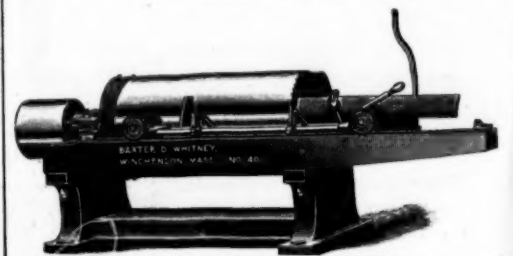
ment and the trade has increased until each has assumed the proportions of a large business in itself, and a removal has been absolutely necessary.

The ground floor of the new Woodbridge Building at William, John and Platt streets has been leased, and is now being fitted up for salesrooms, accounting department and private offices, and the basement for stock. It is to be one of the handsomest offices in the metropolis, and with these increased facilities the company promises even more perfect service to its customers than in the past.

four inches in diameter by forty-two inches in depth (depth measured on the inside), which is the ordinary size for sawing oil-barrel staves. Several different sizes are made, however, from the same design. The machine is very solid, and all parts are made very simple, so there is very little to get out of order, and the machine requires the minimum of care to keep it in order.

The bed is made in one casting, and the trough which catches the stave is also made in one casting. There are, therefore, no bolts or loose pieces that are liable to become detached inside the saw and cause trouble. The carriage is made entirely of steel and malleable iron, and combines great strength and durability, with lightness and ease of operation.

The thickness gaged is easily adjusted for different thicknesses of staves, and is arranged to be thrown back quickly for taking the first cut, and as quickly



BARREL-STAVE SAWING MACHINE.

brought back to place by the movement of a single lever. The trough into which the stave drops after being sawed is arranged so that staves of any width up to fifteen inches are thrown out without the slightest trouble from catching or other causes. The journals are particularly heavy, and have self-oiling bearings, which prevent heating.

The machines are all thoroughly tested before leaving the shop, the 24-inch by 42-inch saws being run at 1700 revolutions per minute.

The surplus material of the sheet steel used in the saw is ground out with their patent grinding machine, thus bringing the saw to uniform thickness, so that it is perfectly balanced and admits a very high speed without trembling, this grinding process being one patented by Mr. Whitney and used by no other maker of cylinder saws. Ten thousand oil-barrel staves (close culled) in ten hours is but an ordinary day's work on this machine. Full particulars can be had by addressing the manufacturer.

Furnaces May Start Up.

According to a report from Middlesboro, Ky., another movement is now under way with a view of starting the Watts furnaces in that city. A number of English stockholders in the company have recently held a conference in Middlesboro, it is understood, with this idea in view. Those interested include Thos. Carter, of Isabella, Tenn., the manager of the Ducktown Copper & Iron Co.; Edgar Watts, of Middlesboro, and John Allen, of London.

Maryland Steel Co.'s Plant.

The resumption of the industrial activity has reached such a point that a large proportion of the plant of the Maryland Steel Co. at Sparrow's Point has resumed operations, giving employment to about 1500 men. The furnaces known as the A, B and C are now turning out about 9000 tons of iron per day. This is practically the full capacity of the plant for pig iron, as the fourth furnace is held reserved in case of accident to any of the others. The large rail mill is working on several extensive orders recently received by the company. It is reported that one of these orders is for 10,000 tons, and was given by the Canadian government.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in any town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and even then they must expect the return of some letters, because of the lack of knowledge on the part of postmasters of all new companies. Criticisms and complaints are invited, as they will the better enable us to guard against errors.

ALABAMA.

Cleburne County—Gold Mining.—It is reported that W. H. Smith, of Birmingham, Ala., and W. A. Scarborough, of Anniston, Ala., will sell 11,000 acres of gold lands to Cincinnati parties for \$117,000.

Huntsville—Oil Wells.—L. A. Orcutt, representing Pennsylvania capitalists, will form a \$5000 company to drill for oil.

Montgomery—Electric-power Plant.—The arrangements completed between the Mutual Light & Power Co., of Montgomery, Ala., and the Tallapoosa Falls Manufacturing Co., of Tallapoosa, Ala., and noted last week, will not be carried out for some months yet. It will probably be ten months before the Tallapoosa Company will be able to put in the electrical machinery and construct the lines for transmitting the electricity to Montgomery, and in the meantime the Mutual Company will erect a steam electrical plant. A 1000 horse-power steam engine, of the Corliss type, 3000-light incandescent machine and two 120-arc-light machines will be installed; W. F. Vandiver, president.*

Montgomery—Rope Mills.—It is reported that W. C. Bibb and associates will establish a large rope mill.

ARKANSAS.

Texarkana—Gas Plant.—The erection of a gas plant for the Huckins House is contemplated. J. Huckins, Jr., manager, can give information.*

FLORIDA.

Jacksonville—Shoe Company.—Incorporated: The Marvin Shoe Co., with a capital of \$10,000, by R. H. Jones, Elisha Gee and William Marvin.

Pensacola—Grain Elevator.—The Louisville & Nashville Railroad Co. has commenced the erection of its big grain elevator at Pensacola. The elevator will have capacity of 500,000 bushels.

Putnam—Water Works.—A bill has been introduced in the legislature to give this city the authority to issue bonds for the construction of water works. Address the mayor.

GEORGIA.

Augusta—Compress.—S. M. Inman & Co. write that they will not build another compress this year, as had been rumored.

Barnesville—Ginnery.—Geo. E. Huguley will build a large cotton ginnery, as stated last week. Site has been bought.

Carroll County, etc.—Mining Developments.—George W. Duncan, of Macon, Ga., has sold a tract of 5000 acres of land to English investors, who may prosecute developments. The lands are located in Carroll and Paulding counties, and are said to be underlaid with gold and other minerals. Price paid for property was \$15,000.

Columbus—Shoe Factory.—The Board of Trade has a proposition from a Michigan man for the establishment of a shoe factory in Columbus.

Dublin—Cotton Mill.—A movement is on foot for the erection of a cotton mill, and Jas. M. Finn is interested.

Greensboro—Cotton Mill.—A movement is on foot for the erection of a cotton mill. A stock company is proposed and will probably be formed. F. S. Mosher, late of Henrietta, N. C., is said to have located in Greensboro and interested himself in the proposed new mill.

Griffin—Oil Mill and Fertilizer Factory.—The Joseph D. Boyd Manufacturing Co. will be organized, with capital stock of \$25,000, to erect a cottonseed-oil mill and a fertilizer factory. J. J. Mangham, J. W. Mangham, Douglass Boyd, Joseph D. Boyd and others are interested.

Kramer—Lumber Mills.—Application made for charter for the Gress Lumber Co., in consequence of a change of proprietorship. H. V. Gress retires, and petitioners for new charter are Morgan V. Gress, J. H. Gress and Maria Gress. The mills of the company are operated exclusively by convicts, and the plant is one of the largest in Wilcox county.

Macon—Phosphate Works.—The Southern Phosphate Works are making the extensive enlargements as noted in our last issue. Another set of acid chambers is being erected, with pyrite furnaces, the new chambers having capacity of 128,000 cubic feet.*

Macon—Foundry and Machine Works.—Mallory Bros. & Co. have secured control of the old Crockett foundry and machine works, and have resumed operations. New machinery will be installed and the capacity increased, and a general foundry business will be conducted.

Savannah—Locomotive Works, etc.—Incorporated: The Savannah Locomotive Works & Supply Co. The incorporators are John J. McDonough, Thomas Ballantyne, W. C. McDonough, P. J. O'Connor and M. A. O'Byrne. The company is authorized to do a general business in building, repairing and leasing locomotives and to manufacture and deal in railroad material and supplies. The amount of capital actually paid in is to be \$100,000, in shares of \$100 each, with power to increase to \$200,000. This company built a plant during 1896, and from the present action it is to be supposed that operations will soon commence.

KENTUCKY.

Delaware—Bridge.—An order of court has been made for the construction of the proposed bridge. For information address Judge Karns, at Owensboro, Ky.

Georgetown—Water and Gas Works.—It is proposed that the city issue bonds for \$25,000 to construct water works and gas plant. Wm. B. Miller, of Cartersville, Ga., is said to be interested in securing franchise for the same enterprises. Address the mayor.

Louisville—Machinery Works.—The Schleicher Machine Co. has been incorporated, with capital stock of \$5000; purpose, to manufacture machines for boxmaking.

Louisville—Woodworking Factory.—Meyer & Voss will erect a new factory for manufacturing wood cabinets and mantels.

Louisville—Lithographic-stone Quarry.—It is reported that Albert Struby has found lithographic-stone deposits on his property.

Marsh Switch (not a postoffice)—Stave Mill.—The F. G. Oxley Stave Co., of Chattanooga, Tenn., will erect a new mill at Marsh Switch, Ky. The new mill will have daily capacity of 15,000 staves and employ fifty men.

Paducah—Clothing Factory.—S. N. Leonard, H. G. Taylor, both of Paducah, and B. A. James, of Evansville, Ind., have incorporated the Leonard-Taylor Manufactur-

ing Co., with capital stock of \$40,000. The company will manufacture clothing, using convict labor in so doing.

LOUISIANA.

Natchitoches—Water Works.—Plans by Engineer Holmbom, of Louisville, Ky., have been accepted for the proposed water-works system. J. C. Trichel, Jr., and J. A. DuCourseau have been appointed a committee to advertise for bids.

New Orleans—Auction Company.—The Haas, Kenny & Boze Auction & Commission Co., with capital stock of \$16,000, has been incorporated.

New Orleans—Ice-delivery Company.—The City Ice Delivery Co., Limited, has been incorporated, with capital stock of \$10,000, to retail ice, etc.; Louis P. Hart, president, and Jas. G. Jenkins, secretary.

New Orleans—Sash and Door Factory.—The J. D. Schroeder Manufacturing Co., Limited, has been incorporated, with capital stock of \$15,000, its purpose being to manufacture sash, doors, blinds, etc.; incorporators, J. E. Billington (president), J. B. Schroeder (vice-president), Bernard Massman (secretary) and others.

MARYLAND.

Baltimore—Steel-rail Mill, Iron Furnaces, etc.—The Maryland Steel Co. now has all the departments of its iron furnace and steel-rail plant in operation. Furnaces A, B and C are in blast, and furnace D is ready to blow in, in case of accident to any of the others; daily output of pig iron is about 1000 tons. The rail mill has a capacity of 1000 tons daily.

Baltimore—Electric-power Plant.—The consolidation of the Pikesville & Emory Grove Electric Railway and the Falls Road Electric Railway will be followed by enlargements to the electric-power plant of the first-named road, located at Owings Mills, near Baltimore. Contract has been awarded for an additional building, 45x150 feet in size, and additional machinery will be installed that will increase the power by 500 horse-power. A car barn to accommodate forty-eight cars will also be built. For further particulars address Geo. R. Webb, manager of Pikesville & Emory Grove Electric Railway, Equitable Building, Baltimore.

Baltimore.—The William G. Henkel Co. has been incorporated, with a capital stock of \$1000, by William G. Henkel and others.

Baltimore—Grain Company.—The Kirwan Bros. Grain Co. has been incorporated by Walter Kirwan, Emory Kirwan, Harry C. Hinde, Joseph M. Warfield and Reginald E. S. Dougherty, for the sale of seeds and fruits. The capital stock is \$10,000.

Belair—Slate Quarrying, etc.—The York & Peach Bottom Slate Co. has been incorporated by Edward M. Vandersloot, N. Sargent Ross, Howard Proctor, S. A. Williams and Philip H. Close, to mine and quarry slate, stone or metals and manufacture same into merchantable products. The principal office of the company will be at South Delta, Pa. The capital stock is \$50,000. The directors for the first year will be Humphrey R. Lloyd, Howard Proctor, Hugh E. Dooley, F. P. Neahr, David E. Deardoff, Daniel K. Trimmer, S. A. Williams, George C. Proctor and George S. Yinger.

Lonaconing—Gas Plant.—The city has granted franchise to Duncan R. Sloan and Isaac Bradburn for the establishment of the gas plant recently referred to. Arrangements for the early commencement of work on the plant will be made.*

MISSISSIPPI.

Holly Springs—Water Works and Electric-light Plant.—Walter G. Kirkpatrick, of Nashville, Tenn., will at once prepare the plans and specifications for the proposed water works and electric-light plant, recently referred to. The construction of sewers is also talked of.

Jackson—Electric Lighting.—The city will open bids June 1 on lighting its streets with electricity for a period of five years; D. D. Porter, Jr., city clerk.*

Vicksburg—Woodenware Factory.—The Vicksburg Land, Manufacturing & Improvement Co. is considering a plan which would ensure the establishment of a large woodenware factory. It is proposed to move the enterprise from the Northwest, where it is now located. A capital of \$50,000 would be employed and 150 hands.

MISSOURI.

Berger—Mills.—The Berger Milling Co., capital stock \$5000, has been incorporated by Jasper Rothgeb, J. F. L. Oberwornman, Robert Dieterle and others.

Joplin—Zinc Mines.—Chartered: The Helyon Zinc Mining Co., capital stock \$10,000, by W. B. Meadowcraft, C. N. Stark, Marriet Stark and others.

Kirksville—Printing Company.—Chartered: The Journal Printing Co., capital stock \$4750, by B. F. Heinz, W. F. Link, F. L. Link and others.

Madison County, etc.—Lead Mines.—S. H. Leathe, of St. Louis, Mo., has purchased for \$300,000 the Mine La Motte lead mines, in Southeast Missouri, Madison and St. Francis counties. The new owner will extend operations at the mines, which are already being extensively developed, increase the working force of 300 men, improve the smelters, put in new machinery, etc.

Maryville—Telephone Company.—The Hanamo Telephone Co., of Maryville, capital stock \$10,000, has been incorporated by E. H. Ralston, J. C. Donnell, H. E. Ralston and others.

St. Louis—Land Company.—The Southwestern Realty Co., capital stock \$12,000, has been incorporated by R. E. Kimbell, Frank Nay, A. H. Tietz and others.

St. Louis.—Incorporated: The Souldard Market Grocery Co., capital stock \$5000, by H. A. Schwenker, Henry Frederick, Clara Schwenker and V. H. Frederick.

St. Louis—Land Company.—Chartered: The George P. Wolff Real Estate Co., capital stock \$5000, by George P. Wolff, Alice E. Wolff, Charles A. Robinson and Morton M. Eaton.

St. Louis—Undertaking Company.—Incorporated: The George N. Lynch Undertaking Co., capital stock \$25,000, by C. A. Lynch, G. N. Lynch and Thomas Lynch.

St. Louis—Ammonia Company.—The Ammonia Company of Australia, of St. Louis, capital stock \$40,000, has been incorporated by R. P. Greer, I. C. Atwood, T. H. Larkin and others.

St. Louis—Printing Company.—Incorporated: The Democrat Printing Co., capital stock \$30,000, by H. J. Cantwell, W. F. Carter, J. W. Evans and others.

St. Louis—Machine Company.—Chartered: The Hopkins Adding Machine Co., capital stock \$60,000, by F. M. Cole, W. W. Hopkins, J. O. McCanne and L. G. Cole.

St. Louis—Mantel Company.—Chartered: The St. Louis Mantel & Heating Co., capital stock \$10,000, by F. J. Moss, L. H. Grinswold and E. E. Roser.

St. Louis—Construction Company.—The Chaplin Realty & Construction Co., capital stock \$25,000, has been incorporated by Geo. G. Chaplin, Harry J. Parsons and Samuel A. Keedy.

NORTH CAROLINA.

Asheboro—Mercantile.—The Asheboro Millinery Manufacturing & Mercantile Co. has been organized, with Mrs. Priscilla Blair president; capital stock \$5000.

Cumnock—Coal Mines.—It is reported that J. L. Mitchell, of Tyler, Pa., and G. H. Losey, of Wilmington, Del., have bought coal lands from D. F. Caldwell, of Greensboro, N. C., and will open mines. It is said that \$50,000 was paid for the property.

Dallas—Cotton Mill.—The Dallas Manufacturing Co. has put in fifty-six new looms, etc.

Lumberton—Sewers.—The city has voted in favor of bonds for the construction of sewers and drainage system. Address the mayor.

Randleman—Warehouse Company.—John H. Ferree and others have incorporated the Randleman Warehouse Co.

Rocky Mount—Cannery.—R. D. Armstrong contemplates establishing a cannery.*

Salisbury—Flour Mill.—A report, as yet unauthenticated, says that Nesbitt & Preasly will build a 25-barrel flour mill.

SOUTH CAROLINA.

Charleston—Cycle Supplies.—Wm. H. Welch, Robert H. Simons, Fred R. Lett and others have incorporated the Southern Cycle Supply Co., with capital stock of \$8000.

Charleston—Fruit Company.—Chartered by Vincent Chicco, Spero Schiadaressi and John Manual, the John Manual Co., with a capital stock of \$1000.

Florence—Harness Company.—T. C. Wil-

loughby, J. B. Rollins and M. H. Bass have incorporated the Florence Harness Co., which will make and sell harness, buggies, etc.; capital is \$3000.

Georgetown — Telephone Lines. — Louis Breslauer, L. C. Lachicotte, F. W. Lachicotte and St. J. M. Lachicotte, of Georgetown, have incorporated the Waverly Telegraph & Telephone Co., which will build and operate telephone or telegraph lines between Georgetown and Waverly Mills; capital is \$1000.

Greenville—Electric Plant.—New company having obtained franchise for electric railway, will erect power plant for supplying electricity. J. S. Lawrence, of Charleston, S. C., can be addressed for information.

Langley—Kaolin Mines.—Charter granted to the Chicora Kaolin Co., with Thomas J. Davis, president, and L. J. Parker, secretary and treasurer.

TENNESSEE.

Blue Springs—Lead and Zinc Company.—Application for charter for the Blue Springs Lead & Zinc Co., made by M. H. Ward, H. H. Ward, T. R. Preston, S. W. Divine, W. D. Carswell. This is a reorganization of the Blue Springs Mining Co.

Columbia—Grain Elevator, etc.—The City Grain & Feed Co. is erecting a grain elevator of 15,000 bushels capacity.

Columbia—Flour Mills, Grain Elevators, etc.—The City Grain & Feed Co. is rapidly completing its 15,000-bushel grain elevator, also putting in cleaning and unloading machinery of 600 bushels capacity hourly. It is more than probable also that the company will erect a 100-barrel flour mill in the near future.

Covington—Water Works.—The proposed water works, already referred to, will be constructed soon. Company will be open for bids on plant to accommodate town of 5000 inhabitants. Address the mayor of Covington.*

Covington — Water Works. — Report says that a company will be organized to construct water works. The mayor can be addressed.

Gallatin—Lumber Mills, etc.—The Gallatin Manufacturing Co. will buy timber lands, develop same, increase the working force in its mills, etc.

Knoxville—Pants Factory.—The Knoxville Pants Manufacturing Co. has been chartered to manufacture pants, etc.; will operate factory recently bought.

Pembroke—Flour and Planing Mills.—Arrangements will be made for the erection of a flour mill and planing mills. Bumpus Bros., Weaver's Store, Tenn., can give information.

Sweetwater — Tannery.—Chartered: The Sweetwater Tanning & Manufacturing Co., capital stock \$20,000, by G. H. Hodge, D. S. Arnold, R. S. McCauley, J. W. Brown and T. M. Long.

Sweetwater — Telephone System. — The Sweetwater Telephone & Improvement Co. has been chartered recently, and is now operating an exchange.*

Sweetwater—Ice and Pants Factories.—A pants factory and an ice factory are proposed to be established, and will probably materialize. D. L. Smith furnished the report.

TEXAS.

Beeville — Steam Laundry.—Mr. C. Miles will establish a steam laundry and has ordered machinery for same.

Dallas—Planing Mill.—The Buell Planing Mill Co., capital stock \$15,000, has been incorporated by Frank T. Buell, J. P. Connelley and Jos. E. DeWitt.

Dallas — Transfer Company.—Chartered: The Merchants' Transfer & Storage Co., capital stock \$2000, by J. M. Rorex, A. Word and D. Murray.

Dallas—Brush Company.—Chartered: The Dallas Brick & Construction Co., capital stock \$3000, has been incorporated by W. J. Bassett, Charles C. Clark and M. W. Russey.

Denning's Bridge—Cotton Gin.—J. E. Pierce will build his proposed cotton gin immediately. Plans and specifications and bids will be received May 10 and contracts awarded.

Denison — Mercantile. — The Hall-Leeper Hardware Co., capital stock \$24,000, has been incorporated by George T. Hall, Kansas City, Mo.; Edgar C. Waples, Paul W. Leeper and E. H. Ling, of Denison, Texas.

Fort Worth — Commission Company.—Incorporated: The George B. Loving Co., a live-stock commission company, by George B. Loving, D. D. Wall, H. L. Oldham; capital stock \$20,000.

Graham—Telephone Company.—Chartered: The Graham, South Bend & Elliasville Telephone Co., by W. L. Donnell, of Elliasville;

O. A. McBrayer, of South Bend; W. H. Ardis, of Elliasville; R. G. Graham and R. F. Arnold, of Graham, Texas.

Palestine—Electric-light Plant.—The council granted a franchise to the Citizens' Electric Light & Power Co. The franchise was granted for a term of thirty-nine years. The company is to have the plant in operation by October 1. A. C. Green, Dr. J. M. Colley, Lee Robinson, O. C. Kennedy and others are interested.

Petersburg—Furniture Factory, etc.—Neece Bros. will establish a furniture factory and planing mill to cost about \$5000.*

Petteway—Cotton Gin.—Young & Forsen contemplate erecting a large gin.

Port Arthur—Lumber Plant.—It is reported that D. A. Duncan, of Duluth, Minn., has been investigating at Port Arthur with a view of locating a large lumber industry at that point.

Sherman—Street Improvements.—An ordinance authorizing the issuance of \$10,000 in permanent improvement bonds to be used on the streets has been put in the hands of the ordinance committee of the city council for approval. Address the mayor.

Stephenville—Drug Company.—The Chastain Drug Company, capital stock \$5000, has been incorporated by O. F. Chastain, J. W. Gray, Lee Young and others.

Sulphur Springs. — The Duncan-Avinger Co., capital stock \$5000, has been incorporated by A. M. Hedick, L. H. Avinger, J. L. Hedick and W. B. Duncan.

Waxahachie—Warehouse Company.—Chartered: The Farmers' Warehouse & Cotton Yard Co., capital stock \$5000, by Isaac Griffith, W. E. Dunbar, J. H. Miller and others.

Wharton—Brick Works.—Charles Smith, of Houston, and R. A. Armstrong, of Wharton, will establish brick works.

Wootan Wells — Cotton Gin. — Hendricks & Burns will rebuild their large gin, which was recently burned.

Wortham—Oil Mill.—The Wortham Cotton Oil Mill Co., capital stock \$25,000, has been chartered by L. N. Barbee, T. A. Bounds, M. C. Tynes and others. The company will erect a mill, as already stated.

Yoakum—Natorium.—Incorporated: The Yoakum Natorium Co., capital stock \$3000, by C. C. Janin, of San Antonio, and E. B. Carruth and J. W. Greer, of Yoakum.

VIRGINIA.

Lynchburg — Knitting Mill.—The Lynchburg Industrial Association is negotiating for the location of a \$20,000 knitting mill.

Newport News — Railroad Warehouses, Piers, etc.—The Chesapeake & Ohio Railway Co. will make arrangements at once to replace the burned warehouses, piers and other facilities at Newport News. Plans and details for reconstruction have not yet been determined upon, but the improvements will be in every respect equal to and probably much superior to the facilities that were destroyed; Decatur Axtell, vice-president, Richmond.

Norfolk—Beach Company.—Chartered: The Willoughby Beach Co., to purchase, hold, improve, sell and convey real estate, etc. The capital stock is \$75,000, and J. W. Perry, president; R. Lancaster Williams, vice-president; W. D. Pender, secretary.

Critz—Gold Mine.—W. S. Floyd, of Baltimore, Md., is investigating supposed gold-bearing lands near Critz, and may open mines. W. C. Schley, of Stuart, Va., is also interested.

Richmond—Clothing Factory.—Morton B. Rosenbaum and Samuel Whitlock have formed the Laurel Manufacturing Co., and will manufacture clothing, utilizing the inmates of the Boys' Reformatory.

Richmond—Plaster Works.—R. Henry Harwood and W. A. Bryson, of Richmond, and Geo. T. Terry, of Boydton, Va., have purchased the plant of the American Champlon Co. and will equip it for the manufacture of a new plaster compound.

Richmond—The Andrew Hanley Co., capital stock \$100,000, has been incorporated by Andrew Hanley and others.

WEST VIRGINIA.

Charleston—Saw Mills.—Chartered: The J. H. Huling Co., with \$100,000 capital paid in. The company will manufacture lumber and operate saw mills; also owns immense tracts of timber land in the Elk river country.

Harper's Ferry—Oil Developments.—It is proposed to investigate as to supposed oil deposits, and Chas. H. Trail is interested.

Hendricks — Manufacturing Company.—C. B. Clark, J. A. McNeely, T. W. Ryan and A. F. Colebank have incorporated the Hendricks Manufacturing Co.; capital stock \$100,000.

Piedmont — Coke Ovens.—The Cumberland Coal Co. is erecting a number of coke ovens on the West Virginia Central Railroad.

Shepherdstown — Bicycle-chain Works.—The Shepherdstown Specialty Manufacturing Co. will increase its capital stock and the capacity of its bicycle-chain factory.

Simpson — Coal Mines. — Wm. T. Gates writes that he has leased coal lands and expects to develop 3000 acres. About two miles of railroad will be constructed to the mines, and six or eight collieries will be opened and a capacity of 3000 to 4000 tons of coal produced. About \$30,000 will be expended. After the mines are opened it is the intention to install a Gates improved coke-oven plant.

Weston—Timber Lands.—Sporford Bros., of Oakland, O., have purchased a tract of timber land near Weston, which is said to contain about 10,000,000 feet of hardwood lumber.

Wheeling — Brick Works.—The Peninsula Brick Co., reported last week as incorporated, will operate a plant already established. Some new machinery will be put in and an increased working force made use of.

BURNED.

Clarksville, Tenn.—The Cumberland Steam Laundry; loss \$2500.

Deerpark, Ala. — Leon Bros.' saw mill; loss \$3000.

Eastman, Ga. — The Eastman Sash and Door Factory.

Huntsville, Ala. — The Mayhew-Myers Planing Mills.

Huntsville, Ala.—Planing-mill buildings, owned by Jas. A. Ward, and machinery, owned by Mr. Blaesi.

Irvine, Ky.—The Irvine Stave Mills.

Magnolia, Miss.—J. N. Cook's saw mill.

Paducah, Ky.—Saw mills of Frank Riglesberger & Sons; loss \$20,000.

BUILDING NOTES.

Americus, Ga.—Stores.—Messrs. Sheffield, Brown and others contemplate building several store buildings.

Anderson, S. C.—Courthouse and Jail.—Bids will be opened July 1 for the erection of the proposed courthouse and jail. Plans and specifications will be on file after June 10. Certified check for \$1000 required from bidders. Address W. P. Snelgrove, chairman building committee, for full particulars.

Atlanta, Ga.—Storehouse.—J. J. & J. E. Maddox will build a storehouse to cost \$18,000. Lewman Bros., of Louisville, Ky., have contract for building.

Atlanta, Ga.—Church.—Plans of Golucke & Stewart have been accepted for M. E. church to be erected in Atlanta and to cost \$25,000; day work. Address Rev. A. J. Cobb.

Baltimore, Md. — Buildings.—Rumors are current of a 12-story office building to be built at Charles and Fayette streets on property owned by B. F. Bennett. J. W. Putts will award contracts for the erection of a five-story warehouse, 31x135 feet, to cost \$50,000; plans by Frank E. & H. R. Davis.

Baltimore, Md.—Parsonage.—The contract for building Holy Innocents' P. E. Church parsonage, Chase and Eden streets, has been awarded to Jones, Pollard & Co. The cost will be \$5500.

Baltimore, Md. — Warehouse, etc.—J. B. Chastain will erect warehouse of brick, stone and iron, four stories, 20x54 feet. Geo. W. Grotham has permit to build twenty-six two-story dwellings. Maximilian Pitt will build thirty-eight dwellings.

Baltimore, Md. — Warehouse.—Addison & Dunn have let contract to Bunnecke & Sons for the erection of a warehouse four stories high, 26x97 feet, to cost \$10,000.

Baltimore, Md.—Hospital.—The Maryland Homeopathic Hospital proposes erecting a new building, five stories high, 150x60 feet, to cost \$80,000.

Bryan, Texas — Residence.—G. S. Parker will erect a \$10,000 residence, after plans by Geo. F. Barber & Co., Knoxville, Tenn.

Carthage, N. C. — Hotel. — Pennsylvania capitalists will build a 200-room hotel in Carthage, with electric-light plant and water works installed. T. B. Tyson can probably give addresses of interested parties.

Columbus, Miss. — Orphanage.—Plans by Andrew J. Bryan & Co., of Atlanta, Ga., have been accepted for the Orphans' Home at Columbus. Notice to contractors will be given later on.

Conyers, Ga.—Church.—Plans of Golucke

& Stewart, of Atlanta, Ga., have been accepted for Baptist church to cost \$16,000, to be erected at Conyers; day work. Address Rev. W. W. Wallace.

Corsicana, Texas—Natorium.—The erection of a \$15,000 natatorium is talked of. John Minor is said to be interested.

Dallas, Texas — Depot.—Sealed proposals will be received until May 24 for the erection of a brick and stone two-story passenger depot. Plans and specifications may be seen at the offices of the city passenger agents of the Gulf, Colorado & Santa Fe Railway at Dallas and Fort Worth, Texas, and also at the office of the undersigned at Galveston. The right is reserved to reject any and all bids. Address inquiries and bids to C. F. W. Felt, chief engineer Gulf, Colorado & Santa Fe Railway, Galveston, Texas.

Dallas, Texas—Church.—Sealed proposals will be received at office of J. Rieley Gordon and H. A. Overbeck, architects, 259 Main street, until May 10, for the erection of St. Patrick's Church, according to plans and specifications. A certified check in amount of \$500, made payable to Rev. J. A. Hartnett, will be required. The successful bidder or bidders will be required to give a bond in amount of 50 per cent. of their contract price for faithful performance. The owner reserves right to reject any or all proposals.

Dublin, Ga.—Hotel.—Bids are now being received on the new hotel noted last week. This building is to have thirty rooms and cost \$7500, after plans by Alex. Blair, of Macon, Ga.; L. H. Hilton, of Dublin, owner. Friendsville, Tenn. — School. — A \$10,000 school building will be erected. J. F. Lee can be addressed for information.

Gainesville, Texas — Jail. — Hull Bros., agents for Pauly Jail Building Co., of St. Louis, Mo., have contract at \$12,750 for erection of jail.

Greenwood, S. C.—Dwelling.—W. P. Hall will erect a \$6000 residence, after plans by Geo. F. Barber & Co., Knoxville, Tenn.

Knoxville, Tenn.—Business Buildings, etc. Briscoe & Co. are having plans prepared for a new store building. Allen, Stephenson & Co. will build a double store. C. M. McGhee will erect a business building. M. D. Arnold will erect a business building. A. P. Lahr may have a business building erected for his purposes.

Laurens, S. C.—Dwelling.—Geo. F. Barber & Co., Knoxville, Tenn., have plans and specifications for dwelling to cost \$10,000 for N. B. Dial.

Louisville, Ky.—School Building.—The city school board will erect a \$45,000 school building. Address W. J. Davis, secretary law school board.

Macon, Miss.—Residence.—Geo. F. Barber & Co., Knoxville, Tenn., have prepared plans for \$3500 residence for D. W. Williams.

Meridian, Miss. — Warehouses.—The City Compress Co. is erecting two large cotton warehouses.

New Orleans, La.—Dwellings. — Building permits issued: To W. L. Vincent for fire-damage repairs to cost \$1500; to James Malley for frame cottage to cost \$2000; to Frank Ricks for frame dwelling, \$1450; to Widow W. F. Gerard for frame cottage, \$1500; to G. D. Hameken for frame cottage, \$1000; to New Orleans Traction Co. for a shed, \$6500; to Mrs. May C. F. St. Ferrol for a frame cottage, \$1200.

Newport News, Va.—Piers, etc.—Sanford & Brooks, of Baltimore, Md., have been awarded a contract to rebuild pier 6 of the Chesapeake & Ohio Railroad, which was destroyed by fire last week. The pier will be 700 feet long, and widened so as to accommodate a shed 602 feet long by 100 feet wide.

Newport News, Va. — Warehouses, Piers, etc.—The Chesapeake & Ohio Railway Co. will restore immediately the facilities that were destroyed by fire last week. New warehouses, piers and other facilities are being considered, and the new facilities will equal and probably surpass the facilities that were destroyed; Decatur Axtell, vice-president, Richmond.

Norfolk, Va.—Warehouse, Wharf, etc.—The Southern Railway Co. will add about six miles of track to the facilities at Plumer's Point; also erect a new warehouse and wharf 270x700 feet, with slips of twenty-seven feet of water on either side; C. H. Hudson, chief engineer, Washington, D. C.

Paducah, Ky.—Dwellings.—Dr. J. T. Reddick will erect a \$5000 residence; Dr. T. E. White will build \$2000 addition, and Fred Kemleifer will build \$8000 residence.

Sabine Pass, Texas — Hotel. — Spence & Leon have contract for the erection of a 40-room hotel building.

Sedalia, Mo.—School.—Bids will be opened

May 4 for the erection of a school building to cost \$8000. Address T. W. Bast, of the building committee.

Tyler, Texas.—Residence.—Geo. F. Barber & Co., Knoxville, Tenn., have prepared plans for a \$8500 residence for L. L. Jester.

Union, S. C.—Stores and Dwelling.—Geo. F. Barber & Co., Knoxville, Tenn., have prepared plans and specifications for store to cost \$3500 for R. P. Harry; for store to cost \$8500 for J. A. Fant, and for dwelling to cost \$6000 for E. Nicholson.

Washington, D. C.—Dwellings.—John Sherman has permit to erect three dwellings to cost \$12,000; Cleveland Park Co., to build \$5000 dwelling.

Washington, D. C.—Dwellings.—Permits issued to Charles R. Pickford, four-story brick apartment house to cost \$15,000; John Cook, two-story brick dwelling to cost \$3600; S. Carr, two-story and basement brick dwelling to cost \$2500.

Washington, D. C.—Dwellings, etc.—Permit issued to W. B. Schneider, 1435 K street, four-story brick and stone addition, with basement, to cost \$40,000; Robert Wynne, 915 Rhode Island avenue, one additional brick story, tile roof, and interior repairs, to cost \$3400. Builders Conner & Collaty are to erect for Mr. James Kellier a row of five brick dwellings, to cost \$9000. Hornblower & Marshall have prepared plans for brick additions to Mrs. C. E. Bates' residence, to cost \$32,000. Francis & Schneider have prepared plans for a \$50,000 residence for James L. Lampton. The house will be three stories and cellar, 51x66 feet, with front of Roman brick and brownstone trim. The interior trim and arrangements are of the finest.

Washington, D. C.—Dwellings.—Mrs. S. R. Thorne will erect a residence 20x68 feet, three stories, with bathrooms tiled and interior furnished with hardwoods, cabinet mantels, heated with hot water, supplied with electric lights, electric bells, speaking tubes, etc.; the cost will be \$12,000, and the architect and builder is I. D. Bursey. Plans are being completed for a residence by B. Frank Meyers; it will be 20x50 feet, three stories, heating by hot water, and all modern improvements and conveniences will be included. R. F. De Grain will erect a two-story brick residence to cost \$15,000. Christian J. Ubbhoff has had plans prepared and will at once commence the erection of seven dwellings that will cost about \$4000 each. Architect William G. Peter and William B. Upton, a civil engineer, had a consultation with Building Inspector Brady in reference to the office building to be erected at the northwest corner of Fourteenth and F streets, for Joseph E. Willard, and for which they have been commissioned to prepare plans. Carpenter & Peebles, of Norfolk, Va., have opened offices in the Kellogg Building and have completed plans for apartment building; this property is owned by the Taylor estate, and will be thoroughly fireproof, six stories and cellar, with exterior walls of buff brick and light stone; the building will be strengthened by a steel frame. Each floor will have six suites of apartments, and these will be heated by steam and have tiled baths, electric elevator service, incandescent lights and other modern fixtures; the estimated cost is \$80,000. A. B. Mullett & Co. have finished plans for two stores to be erected for George N. Beale; they are to be two stories and cellar, with fronts of Pompeian brick and stone, splay show windows, latrobes, baths, etc., and cost \$3000 each.

RAILROAD CONSTRUCTION.

Railways.

Alexandria, La.—President Joseph J. Waltz, of the Gulf, Louisiana & Northern Railway Co., claims that he has already secured the right of way for about 120 miles of this road and a written guarantee amounting to \$50,000 in donations for the enterprise. He announces that it is expected to let contracts in about two months for the work.

Baldwin, Fla.—It is reported that the Cummer Lumber Co. has begun work on its proposed railroad line between Baldwin and Macclenny, Fla. This road is to be used for logging purposes, and will be about twenty-four miles long.

Baltimore, Md.—It is stated that J. G. White & Co., of Baltimore, have secured the contract to build the section of the Baltimore & Northern Electric Line from Baltimore to Mt. Washington and Arlington. It will comprise about thirteen miles of double track. It is also stated that forty motor cars have been ordered for the system, and arrangements made to increase the equipment of the power-house. The Baltimore & Northern Company, of which Henry A. Parr is

president, also controls the Pikesville, Reisterstown & Emory Grove Electric Line.

Bear Spring, Tenn.—It is reported that Joseph Coyne, of Louisville, Ky., has secured contract to build the railroad line from a point on the Louisville & Nashville to the Cumberland property and Bear Spring.

Clinton, Mo.—General Manager Josselyn, of the Kansas City, Osceola & Southern Railway, has received orders from the company to rebuild the Kansas City & South-eastern, beginning at Dodson and running to Westport, in Jackson county. This road is twelve miles long. The main office is Kansas City.

Dublin, Ga.—It is reported that the Macon, Dublin & Savannah Co. has determined to build its railroad line to Lyons, Ga., to connect with the Georgia & Alabama system. Surveys have been completed for the extension. D. B. Dunn, at Dublin, is superintendent of the company.

Fort Smith, Ark.—The Arkansas Central Railroad Co. has filed articles of incorporation. The company proposes to build a railroad from Fort Smith to Paris, forty miles. The capital stock of the company is \$600,000, half of which has been subscribed by Chas. C. Godman, of Chicago, and Joseph H. Larimer, of Peru, Ind. In addition to these the directors are: Allen G. Tuppeer, of Peru, Ind.; Virgil B. Beavers, of Charleston, Ark.; John S. Shibley, of Paris, Ark., and S. P. Day and Wharton Carnall, of Fort Smith.

Galveston, Texas.—The company organized to build and equip an electric line of road between Houston and Galveston has completed two different lines of survey and taken the surveying party off the field. A. B. Blekins, at Houston, may be addressed.

Hamburg, Ark.—It is reported that a company is being formed to build a railroad over the route proposed by the late Austin Corbin, to terminate on the Mississippi river at a point near Sunnyside. James Parker, of the First National Bank of Cripple Creek, Col., it is stated, is interested in the scheme.

Interlachen, Fla.—It is reported that the company owning the electric railroad between Interlachen and Mariners' Lake will extend it to Grandin Station, on the Georgia Southern & Florida Railroad.

Montgomery, Ala.—All the masonry work for the five bridges on the Mobile & Ohio Railroad extension has been let to Watkins & Hardaway, of Birmingham. The work they have secured is the building of two piers at Columbus, two piers at Sipsey, five at Tuscaloosa, two at Centerville and five at Montgomery. The entire work represents \$135,000.

Stuttgart, Ark.—J. B. Hackler, manager of the Stuttgart & Arkansas River Railroad, advises the Manufacturers' Record that a recent extension of five miles of this road has been completed.

Texarkana, Ark.—The Texarkana, Shreveport & Natchez Railroad is to be extended twelve miles in Caddo parish, La., at once. The grading has been finished, and steel rails purchased for a portion of the extension. B. Collins, of Texarkana, is general manager.

Thomasville, Ga.—It is reported that the railroad proposed from Thomasville to a point in Northern Florida will be eventually extended to Tallahassee and St. Mark's, on the Gulf coast. The extension will be about forty miles in length. People of Thomasville have subscribed, it is reported, \$35,000 towards the enterprise.

Toccoa, Ga.—The Southern Industrial and Colonization Society, which is promoting the electric railroad to Toccoa Falls, has organized under the laws of West Virginia. Its officers are: James E. Diffenderfer, president; F. Balcom, general manager, and D. L. Ferguson, secretary. Its officers may be addressed, care of the National Guaranty & Trust Co., No. 1227 G street, Washington, D. C.

Wadley, Ga.—G. D. Tysor, general manager of the Wadley & Mt. Vernon Railroad Co., advises the Manufacturers' Record that it is intended to extend this line from Rixville to Fitzgerald, as already stated. The extension will be seventy-five miles in length.

Winston, N. C.—The Chamber of Commerce of Winston has appointed a committee to promote the proposed railroad from Winston to a point on the Seaboard Air Line near Monroe, N. C. This is the Winston-Salem Southbound Railroad project, as it is termed. It is understood that J. W. Fries, of Winston, is among those interested.

Street Railways.

Portsmouth, Va.—It is stated that the North Portsmouth Street Railway Co. has purchased rails and other material for its electric line and expects to begin work with-

in thirty days. M. W. Mason is manager of the company.

Richmond, Va.—The Richmond Railway & Electric Co. has decided to extend its line recently completed between Barton Heights and Lakeside, to connect with its street system. The extension will be double track. A. Pizzini may be addressed.

Sherman, Texas.—The city council has guaranteed a franchise for an electric railway in the suburbs. It is understood that it will be an extension of the road now in operation, and that St. Louis parties are backing the matter. The additional mileage will cost about \$70,000. C. D. Batsell, general manager of the Sherman City Railway Co., may be addressed.

Wheeling, W. Va.—The Suburban Electric Railway Co. has been organized at Wheeling, W. Va., by N. E. Whitaker, George W. Woods and others to build a street railway within the city limits. N. E. Whitaker is president of the company, and E. Randolph Hicks is secretary.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Acid-chambers Equipment.—The Southern Phosphate Works, Macon, Ga., will buy burners and acid eggs for acid chamber.

Belting.—Neece Bros., Petersburg, Texas, will buy belting for furniture factory and planing mill.

Boiler.—J. S. Tisdale, Lucknow, S. C., will soon be in the market for a 70-horse-power boiler.

Bollers.—See "Water-works Equipment."

Bridges.—G. D. Tysor, general manager, Wadley, Ga., will want bridges for Wadley & Mt. Vernon Railway.

Building Materials.—L. R. Logan, Shreveport, La., wants to buy nine mantels, nine grates, three pairs of sliding doors, one single sliding door, sash, with art glass, ten fine single doors, etc.

Canning Machinery.—R. D. Armstrong, Rocky Mount, N. C., wants to correspond with makers of canning machinery, in order to obtain information and estimates on cost of small plant.

Electrical Machinery.—The Mutual Light & Power Co., W. F. Vandiver, president, Montgomery, Ala., is in the market for a 3000-light incandescent machine and two 120-arc-light machines.

Electrical Manufacturers.—The Sweetwater Telephone & Improvement Co., Sweetwater, Tenn., wants to correspond with electrical manufacturers.

Electric Lighting.—Bids will be opened June 1 for lighting the streets of Jackson, Miss., with electricity for a period of five years; D. P. Porter, Jr., city clerk.

Engine.—See "Holting Engine."

Engine.—Geo. H. Lowell, Dalton, Ga. (dealer), wants to buy for a customer a 70 to 80-horse-power Corliss engine, new or second-hand.

Engine.—The Mutual Light & Power Co., W. F. Vandiver, president, Montgomery, Ala., will buy a 1000-horse-power engine, single cylinder Corliss, sectional wheel, heavy duty frame, metallic packing all over, equipped with oil guards, cups and lubricators; engine to be erected ready for work; piping and foundation to be furnished and erected by the Mutual Company. Second specifications: Single-cylinder Corliss engine, split wheel, ordinary duty frame, metallic packing all over, equipped with oil guards, cups and lubricators complete; engine to be erected ready for work; piping and foundation to be furnished and erected by Mutual Company. Size of cylinders on which estimates are wanted: 24x48, 26x48, 28x48, 28x54, 30x48, 32x48, 34x48, 32x54.

Flour Mill.—R. R. Emmert, Erwin, Tenn., wants to correspond with makers of flour-mill machinery, adapted to very light power.

Flour-mill Equipment.—A. Q. Bonland, Pinckard, Ala., wants to buy a set of millstones and water wheel; wants small wheel

and rocks, 40-inch runner, about 2500 pounds.

Furniture Machinery.—See "Woodworking Machinery."

Gas Plant.—Duncan R. Sloan and Isaac Bradburn, Lonaconing, Md., want to correspond with equipers of gas plants, etc.

Gas-plant Machinery.—J. Huckins, Jr., manager, Texarkana, Ark., wants addresses of manufacturers of wood gas retorts, or plants.

Holting Engine.—Wm. J. Zeh, 920 Twentieth street N. W., Washington, D. C., wants to buy a second-hand 12 to 15-horse-power double-drum holting engine, in first-class condition.

Ice Machinery.—W. H. Griffith, 329 Routh street, Dallas, Texas, wants addresses of makers of ice machines of 100 to 300 pounds capacity.

Ironworking Machinery.—Geo. H. Lowell, Dalton, Ga., wants to buy an iron planer 28x28-inch by five feet (party is dealer).

Kinetoscope.—W. G. T. Carver, 413 Navarro street, San Antonio, Texas, wants to correspond with operators of kinetoscopes and vitascopes, and with firms that prepare plates and make the pictures for exhibition.

Machine Tools.—The Fuller Engineering Co., Calvert, Texas, wants to buy a 20-inch lathe, ten feet between centres, with face plate, universal chuck, power cross-feed, taper attachment, separate screw-cutting lead screw, hollow spindle, compound rest, with heavy box-burder bed and all modern improvements; also counter-shaft for same. Quote cash prices for above delivered at Calvert. Company also wants prices on 28-inch drill press, with all modern improvements, and on 15-inch shaper, with vise and all modern improvements.

Printing Works.—S. Story, of the budget and assessment committee, New Orleans, La., wants estimates and information on newspaper equipments.

Railway Equipment.—G. D. Tysor, general manager, Wadley, Ga., will need rails and bridges for Wadley & Mt. Vernon Railway.

Railway Equipment.—J. D. Kirkpatrick, Birmingham, Ala., wants a small 30-inch-gage saddle-tank dummy and 100 tons of 40-pound steel rails.

Railway Equipment.—The Borde Engineering Co., 402 Liverpool and London and Globe Building, New Orleans, La., is in the market for forty or fifty good second-hand standard-gage freight cars, 60,000 pounds capacity, New Orleans delivery.

Railway Equipment (logging road).—N. C. Gresham, Braidentown, Fla., wants to buy a traction engine and truck for carrying lumber.

Roofing Tile.—Jas. C. Truman, Binghamton, N. Y., wants to buy roofing tile.

Sewing Machine.—Thomas Bacon, Jr., Laurel, Md., wants a sewing machine, chain-stitch, for sewing straw quarter of an inch thick with coarse twine; space under arm must be seven inches or more.

Sewing Machines.—The Knoxville Pants Manufacturing Co., 110 Mabry street, Knoxville, Tenn., will probably need power sewing machines—just the heads.

Soap Machinery.—W. A. Pledger, Athens, Ga., wants to buy machinery for manufacturing soap, about 2000 to 5000 pounds daily.

Telephone Equipment.—The Monroe Telephone Co., Monroe, La., wants the best and latest-improved switchboard, 200 drops; W. B. Rellly, president.

Telephone Instruments.—See "Electrical Manufacturers."

Water Wheel.—See "Flour-mill Equipment."

Water Wheel.—McGahey Bros., Elkton, Va., want a ten or nine-inch water wheel; second-hand one will answer.

Water Works.—J. C. Trichel, Jr., and J. A. Ducourseau, Natchitoches, La., have been appointed a committee to advertise for bids on the construction of water works.

Water Works.—Company at Covington, Tenn., will be open for bids on the construction of water works to accommodate town of 5000 inhabitants. Address the mayor of Covington.

Water-works Equipment.—Contracts will be awarded May 11 for approximately 554 tons pipe and specials, fifty-four hydrants, fifty valves, two 50-horse-power boilers, steel roof trusses, pumping station of brick, pipe laying, etc. Address J. R. Brinker, city clerk, West Point, Miss.; Walter G. Kirkpatrick, engineer.

Woodworking Machinery.—The Pioneer Guano Co., Albany, Ga., wants addresses of dealers in second-hand planing mills.

Woodworking Machinery.—Neece Bros., Petersburg, Texas, will buy machinery for furniture factory and planing mills; plant will cost \$5000.

TRADE NOTES.

Removal.—George G. Spencer, dealer in steel nails, tinplates, sheet steel, seamless tubes, handle bars and forks, has removed to 318 Royal Insurance Building, Jackson street, Chicago.

Wants to Move South.—An owner of the necessary equipment, who has as well the required capital, desires to move South and engage in the logging business. Details can be had by addressing M. Mitskun & Co., Chamber of Commerce, Detroit, Mich.

A New Department.—The Odell Hardware Co., Greensboro, N. C., announces the addition of a mill-supply department to its regular business. For this purpose it has erected a building 60x120 feet, four stories high and fireproof, especially adapted for the mill-supply business.

Sale of Lime Works.—An important sale is that of the A. C. Ladd Lime Works, located in Bartow county, Ga. It will take place on May 15. An interesting pamphlet descriptive of the extent of the property and the opportunities it offers to investors is issued. It can be obtained from A. L. Kontz, receiver, 6½ South Broad street.

Orders for Valves.—The Chapman Valve Manufacturing Co., Indian Orchard, Mass., reports large orders on hand for hydrants, water gates and bronze-seated valves. This company is the largest manufacturer in the world of this class of goods, and in reputation it has for many years stood at the head, both in this country and in Europe.

Zell Rollers.—Campbell & Zell Co., among recent orders, has received contract from the Metropolitan Railroad, Washington, D. C., for 1204 horse-power of Zell improved water-tube safety rollers. It makes the fifth order from this road. There are nearly 3000 horse-power of Zell rollers now in use by this road in its several power-houses in Washington.

Treasurer Gaylord.—The Vitrified Wheel Co., Westfield, Mass., has a new treasurer and manager in the person of Mr. G. L. Gaylord. Under his supervision the business of the company shows very great improvement, and emery wheel orders are daily shipped to all parts of the country. The company has lately made and shipped to Connecticut parties an emery wheel forty-one inches in diameter, the largest wheel made by that company.

Cold-water Paint.—Alden Speare's Sons & Co., 369 Atlantic avenue, Boston, Mass., have succeeded in mixing powder and water so as to form a useful combination in their weather-proof cold-water paint, which is a dry powder, requiring only the addition of cold water to make it available for instant use. Its covering capacity is claimed to be 100 per cent. better than oil paint, while its cost is much less. A circular to be had for the asking gives full information.

Foreign Orders.—From its St. Petersburg office, the Buffalo Forge Co., Buffalo, N. Y., recently received an order for two engines of the enclosed type, running in oil. Both are of the same size (8x10), and they are to be shipped to St. Petersburg, Russia. These engines will be used for electric lighting. Throughout the dull times of the past few years the engine department of this company has been very busy, and unable to keep up with orders. The erection of a new five-story building, 210x60 feet, is now in hand; the latest-improved machinery, testing appliances, etc., will be installed. The stables and warehouse facilities are being enlarged by the erection of additional buildings.

Wire-work Contracts.—The Ludlow-Saylor Wire Co., St. Louis, Mo., is having a large trade in wrought-iron fences that is keeping it busy in this department. It has just closed contracts for elevator enclosures and cabs for the new Holland Building, St. Louis, an 11-story building, and for elevator enclosures for the Samuel C. Davis Building, St. Louis. A pair of fine brass doors and a brass grille for a vault in Bellefontaine Cemetery, St. Louis, have been completed, and the company is now busily engaged on a large contract for pipe-rail work for the Tennessee Centennial Exposition. It is running its wire-cloth department double turn, and reports a very heavy demand for mining screens.

Norton Sharpening Stone.—The Norton Emery Wheel Co., Worcester, Mass., recently perfected a new sharpening stone. The material of which the stone is composed is referred to as a particularly fine quality of corundum, and, as it is made by what is known as the vitrified process, in which

the stone is subjected to great heat, it is explained that it is waterproof and not susceptible to the action of oils or other liquids. The company claims that the stones can be produced with greater uniformity and evenness as to hardness and coarseness than has heretofore been the case with tool-sharpening stones. Stones can be molded into any desired shape or form and in a variety of grades, both in hardness and coarseness. They are put up in neat pasteboard boxes, also in finished oak cases, every stone being guaranteed.

Convention of Foundrymen.—On May 10 the opening session of the convention of the American Foundrymen's Association will be held at Detroit, Mich. This convention promises to be a notable one, both in attendance and in the importance of the work it will consider. Allocated to the occasion, the foundrymen of Detroit have extended a warm invitation to the trade to visit their city during convention week. Papers to be read at the convention are of timely interest and will be presented by experts. Among them are the following: Cupola Practice, Melting and Controlling Mixtures of Iron, James A. Beckett, superintendent, Walter A. Wood Co., Hoosic Falls, N. Y.; The Value of Chemistry in the Foundry, S. S. Knight, chemist of the Addyston Pipe & Steel Co., Cincinnati, O.; Description of a Swiss Iron Foundry, Henry Gretener; Crucible Making, and How They Should Be Cared For, John A. Walker, vice-president and treasurer of the Joseph Dixon Crucible Co., Jersey City, N. J.; Notes on Pipe Founding, S. Groves, of the Taylor, Wilson & Co., Pittsburg, Pa.; The Value and Use of the Different Alloys in Brass Founding, F. J. Davis, of the Cowles Electric Smelting & Aluminum Co., of Lockport, N. Y.; Compressed Air, J. F. Lewis, of the Rand Drill Co., New York and Chicago; Elevators and Yard Cranes, G. A. True, of the Whiting Foundry Equipment Co., Chicago, Ill.; Chilled Castings, E. H. Putnam, the Chattanooga Plow Co., Chattanooga, Tenn.

TRAVEL OF TODAY.

Southern Routes that Fascinate the Tourist by Their Historic-Interest and Picturesque Attractions.

The traveler of today is very fastidious in his requirements. So rapid has been the progress made in transportation facilities on land and water, that the tourist for business or pleasure has been educated to expect the best of everything on his journey. The contrast between the modern luxurious passenger cars and the narrow, ill-ventilated, poorly-constructed coaches in service as late as a decade ago, is almost as marked as that between the floating palaces carrying thousands of travelers on the American inland waters and the small, poorly-furnished and slow-going steamers which the public in many instances had to depend upon as late as the 80's.

For many years the Chesapeake bay has been one of the most popular routes for the traveling public in the world. This is owing to the natural beauties of what some have called the American Mediterranean, and the superb service afforded by the Old Bay Line of steamers.

The Baltimore Steam Packet Co., which has owned and operated the Old Bay Line for over a half century, is truly an illustration of the progress made in water transportation.

In its early days the public spirit characteristic of its policy was displayed by its management, who realized the fact that a liberal patronage depended on having the staunchest and swiftest vessels, the best appointments, and in furnishing every requisite for the comfort of travelers. As fast as improvements were made in marine architecture, they were adopted by the Old Bay Line. As a consequence its fleet of vessels has always been maintained at such a high standard that it has occupied the foremost place in the public favor. It is hardly necessary to speak of the Alabama, a steamer which has already earned the title of the "Queen of the Chesapeake," being by far the swiftest and most palatial vessel that has ever plied its waters; or the Georgia, which has almost an equal reputation with the many thousands who yearly visit the North or South by the great highway.

Within the last year the Baltimore Steam Packet Co. has established a route between Baltimore and Richmond by way of the Chesapeake bay and the James river, which forms, without doubt, one of the most interesting journeys in this country. While the Chesapeake has many features of historic interest in addition to its natural beauties, one sees

scarcely a point of land on the James which is not associated with some legend or poem, or which does not mark the site of a fiercely-fought battle, either in the last or present century. The soldiers of three wars have struggled on its banks. On Drewry's Bluff, rising grim and high above its waters, are still to be seen the fortifications erected during the late war, which give the place the title of the "Gibraltar of America." More than one Southern mansion can be seen from the river, with walls pierced by the cannon balls of the Union or Confederate guns. From the thickets around Jamestown and other colonial settlements the arrows of Powhatan's warriors came in volleys as the bands of the Indian emperor attacked Capt. John Smith and his followers. The ruins of the first church erected in America can still be seen on Jamestown Island. The famous manor houses of Brandon, Shirley, Claremont and Westover, all built in the last century, and to which Washington, Lafayette and other illustrious statesmen were visitors, stand on the picturesque banks. On the James river are the birthplaces of Tyler and Harrison, two of the Presidents of the United States.

The capital of the Confederacy, at the end of the "James River Route," presents a strikingly beautiful appearance, with its parks, monuments, venerable Statehouse, churches and other buildings of note. It was in Richmond that Patrick Henry delivered his "Liberty or Death" oration. Washington sat with the legislators many times in the Statehouse, which, with his statue, form conspicuous features of the Capital square. The monument to General Lee, the great leader of the Confederacy, is erected in one of its parks, and to those who still cherish the memory of the "lost cause," the old Jefferson Davis mansion, with its collection of mementoes of Southern soldiers, has an especial attraction.

But aside from the historic surroundings, the ever-changing scenery along the river has a fascination to the lover of Nature, for it is here that she can be seen in her most picturesque garb. As the service of the Baltimore Steam Packet Co. is direct between Baltimore and Richmond, the traveler has the benefit of a trip entirely by water, without a transfer. The Virginia, an elegant side-wheel vessel, affording ample accommodations for 300 passengers, leaves Baltimore Mondays, Wednesdays and Fridays at 4 P. M., arriving at Richmond at 10 o'clock next morning. Anyone desirous of making the round trip can have five hours in which to visit the points of interest and arrive in Baltimore at 9.30 the next morning.

With the choice of two such interesting routes, the traveler by the Old Bay Line has an unparalleled opportunity to visit some of the most attractive resorts in this country, and it is safe to say that nowhere in the same distance can be found so many features attractive to lovers of art and students of history.

Nashville Exposition via Chickamauga

Buy your tickets to Nashville via Cincinnati and the Queen & Crescent Route to Chattanooga. Visit that historic city and the great battlefields of Missionary Ridge and Lookout Mountain; spend a day at the Chickamauga National Military Park; then, refreshed and ready for new conquests, continue the journey. Low rates to the great Exposition in effect via this pleasant route.

The Queen & Crescent train service is perfect, the schedules fast ones, the scenery unsurpassed anywhere.

If you want the journey to be a pleasant one, see that your tickets read via Cincinnati and the Queen & Crescent. W. C. Rinearson, general passenger agent, Cincinnati, O.

A Free Library!

The Cotton Belt Route has issued a series of handsomely-illustrated pamphlets describing the wonderful resources of Arkansas and Texas. They are entitled "Texas," "Homes in the Southwest," "Truth About Arkansas," "Glimpses of Southeast Missouri, Arkansas and Northwest Louisiana," and "Lands for Sale Along the Cotton Belt Route." These little books will tell you all there is to tell about the Great Southwest, and will be a great help to you in choosing a good place to locate. If you want any, or all of them, free, write to any agent of the Cotton Belt Route (the comfortable route to Texas), or to E. W. LaBeaume, general passenger and ticket agent, St. Louis, Mo.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

No advertisements but those of a financial character will be accepted for the following page.

New Corporations.

The Farmers' Mutual Fire Insurance Co. has been organized at Nevada, Mo.

It is reported that A. E. Porter, of Smithville, Tenn., will open a bank at Abbeville, Ga.

It is reported that a company with \$200,000 capital will open a bank in the northern section of St. Louis.

The People's Savings Bank of Bowling Green, Mo., has been formed, with \$10,000 capital, by S. W. Reynold, M. W. Macpipe and others.

The comptroller of the currency has authorized the national bank recently formed at Gaffney, S. C., to begin business, with \$50,000 capital.

The Galveston Trust & Safe Deposit Co. has been formed at Galveston, Texas, by H. A. Landes, M. W. Shaw and others, with \$100,000 capital.

The People's Mutual Fire Insurance Co. has been incorporated at Baltimore by Elias Rohr, Samuel Dorp, Adolph Sauber, John J. Sissner and Charles J. Wiener.

A building and loan association has been formed at Knoxville, Tenn., with J. C. Williard, president; Thomas R. Price, vice-president; H. O. Eley, secretary, and A. J. Price, treasurer. It will be called the Home Building Association.

The Fireside Permanent Building Association has organized at Belair, Md., by electing the following officers: President, John D. Worthington; vice-president, G. Smith Norris; secretary, P. Moores Maynadier; treasurer, Clifford D. Rosan. The capital is \$300,000.

The stockholders of the Clay County Bank, of Piggott, Miss., have elected the following board of directors: E. N. Royall, D. D. Throgmorton, J. P. Potter, W. J. Davidson, H. W. Moore, Piggott; J. F. Franklin, Fredericktown, Mo.; F. G. Taylor, Corning. E. N. Royall has been elected president; J. E. Franklin, vice-president, and B. L. Royall, cashier.

The latest developments regarding the Southern Building and Loan Association in Knoxville are to the effect that a number of the stockholders have formed an organization committee, which includes representatives from each State where the company has done business. It is stated that this committee will organize a company, to be known as the Loan & Deposit Co. of Georgia, with headquarters at Atlanta. It will have \$1,000,000 capital.

New Securities.

The town of Montrose, Mo., will, it is reported, issue \$6000 of schoolhouse bonds. Address the town clerk.

The Postal Telegraph & Cable Co. in Texas has determined to increase its capital stock from \$300,000 to \$600,000.

The city of Carrollton, Ga., has received proposals for \$15,000 worth of 5 per cent. school bonds. Address the mayor.

The proposed bond issue to be made by Fayetteville, N. C., will amount to \$15,000. The mayor of Fayetteville will give information.

The bond issue to be made by the board of education at Huntington, W. Va., will amount to \$15,000. The board may be addressed as above.

The St. Louis Electric Light & Power

Co. is considering a plan to issue \$500,000 worth of 6 per cent. bonds. G. W. Guernsey is president of the company.

It is reported that the city council of Key West, Fla., has determined to issue \$100,000 in 5 per cent. bonds to refund indebtedness. Address the mayor.

Bids will be received until July 1 for the issue of \$10,000 in 6 per cent. bonds, to be sold by the school district of Spartanburg, S. C. Address the county clerk.

The proposed bond issue to be made by the city of Meridian, Miss., will amount to \$15,000. Bids will be received until May 27 by Isaac A. Mooser, city clerk.

Of the new issue of Raleigh & Gaston Railroad 5 per cent. bonds which were purchased by the Mercantile Trust & Deposit Co., of Baltimore, it is stated that holders of the outstanding 8 per cent. bonds have exchanged so far \$387,000, and that sales have been made of \$200,000. The whole amount taken by the trust company was \$1,200,000.

Dividends and Interest.

The Bank of South Boston, Va., has declared an annual dividend of 6 per cent.

The Prytania Street Market Co. of New Orleans has declared a dividend of \$1 per share.

Humbleton & Co., of Baltimore, are paying the May interest due on bonds of the Baltimore Traction Co.

Messrs. Townsend, Scott & Co., of Baltimore, are paying interest due May 1 on the bonds of Staunton, Va.

Coupons due on the first mortgage 5 per cent. bonds of the City Passenger Railway Co. are being paid at the National Mechanics' Bank of Baltimore.

The following interest payments are being made at the office of the Mercantile Trust & Deposit Co. of Baltimore: Paducah Water Co. first 6s, Merchants & Miners' Transportation Co. first mortgage extension 4s, Charlotte City Water Co. first 6s, Americus Illuminating & Power Co. first 6s, Arundel Building Co. first 5s, City of Winston (N. C.) public improvement 5s, Monongahela River Railroad Co. car trust 6s, Redemption Monongahela River Railroad Co. car trust 6 per cent. notes.

Receivers of the Baltimore & Ohio Railroad Co. will pay interest as follows: At London, through J. S. Morgan & Co., on loan of 1874; at the Mercantile Trust Co., New York, on the bonds of the Akron & Chicago Junction Railroad Co.; at Brown Brothers & Co., New York, and at Alex. Brown & Sons, Baltimore, on bonds of the Baltimore Belt Railroad Co.; at J. P. Morgan & Co.'s, New York, on the bonds of the Baltimore & New York Railroad Co.; at the office of the Finance Co., of Pennsylvania, Philadelphia, on the Baltimore & Ohio equipment trust series "B" and on the first mortgage bonds of the Confluence & Oakland Railroad Co.

Financial Notes.

J. B. Jones has been elected second vice-president of the First National Bank of Covington, Ky., and E. S. Lee, cashier.

City Register Stone, of Baltimore, has negotiated a temporary loan of \$500,000, on which 3 per cent. interest is to be paid. This is said to be the lowest rate ever obtained on a loan made by this city.

The New York Stock Exchange has decided to list the issue of what is known as the first mortgage preference bonds of the Georgia & Alabama Railroad Co. These bonds bear 5 per cent. interest.

According to a recent census taken, there are 104,090 buildings of all kinds in Baltimore, showing an increase compared with 1895 of 1737 dwelling-houses, forty-nine educational buildings, 1337 business buildings, two churches, 245 stables and nine manufactories—a total of 3379.

TABLE OF CONTENTS.

EDITORIAL:	Page.
The South and Corporations.....	255
Round Bale Co-operation.....	255
A Sign of Progress.....	255
Extensive Land Sale.....	256
Idle Opposition to the New Baling System.....	256
Industrial News from Birmingham.....	257
Louisville, Ky.....	257
"Southern States" Magazine.....	257
Activity at Greenville, S. C.....	257
A Model Inn Suggested.....	257
RAILROAD NEWS:	
New Passenger Association.....	258
To Extend to Fitzgerald.....	258
A Proposed Consolidation.....	258
Another Baltimore Suburban Line.....	258
Charleston as a Cattle-Shipping Port.....	258
Alabama Coal Shipments.....	258
The Proposed Mississippi Bridge.....	258
Locomotives for Southern Lines.....	258
Baltimore Steam Packet Co.....	258
Railroad Notes.....	258
Erecting an Elevator.....	258
Inspecting Georgia Gold Mines.....	258
COTTONSEED OIL:	
The Market for Cottonseed Products.....	259
Cottonseed-Oil Notes.....	259
Textile Notes.....	259
To Push Its Southern Business.....	259
PHOSPHATES:	
Phosphate Markets.....	259
Phosphate and Fertilizer Notes.....	259
LUMBER:	
Lumber Market Reviews:	
Baltimore.....	260
Charleston.....	260
Savannah.....	260
Brunswick.....	260
Jacksonville.....	260
Mobile.....	260
Reamont.....	260
Lumber Notes.....	261
Iron Markets.....	261
Popular with the People.....	261
MECHANICAL:	
Electrical Self-Locking Switch and Signal Apparatus (Illus.).....	262
Automatic Circuit Breakers (Illus.).....	262
Electricity vs. Steam.....	262
Patent Scroll Saw (Illus.).....	263
Cazin Water and Steam Wheel (Illus.).....	263
Kriebel Patent Vertical Boiler (Illus.).....	264
Muncy Sieve Scalper and Grader (Illus.).....	264
Asbestos (Illus.).....	264
Stave-Sawing Machine (Illus.).....	264
Furnaces May Start Up.....	264
Maryland Steel Co.'s Plant.....	264
CONSTRUCTION DEPARTMENT:	
New Enterprises.....	265
Building Notes.....	266
Railroad Construction.....	267
Machinery Wanted.....	267
Trade Notes.....	268
FINANCIAL NEWS:	
New Corporations.....	268
New Securities.....	268
Dividends and Interest.....	269
Financial Notes.....	269

THE AMERICAN COTTON OIL COMPANY.
Dividend No. 11. Preferred Stock.
No. 46 CEDAR ST., NEW YORK CITY, May 4, 1897.
The regular semi-annual dividend of THREE (3) PER CENTUM upon the outstanding Preferred Capital Stock of the American Cotton Oil Company has this day been declared out of the net profits of the Company, payable on the 1st day of June, 1897, at the Bank of Messrs. Winslow, Lanier & Company, No. 17 Nassau St., New York City, to the holders of record of such Preferred stock, upon the closing of the Preferred Stock Transfer Books.
The said books will be closed on Saturday, the 15th day of May, 1897, at twelve o'clock noon, and will remain closed until Wednesday, the 2d day of June, 1897, at 10 o'clock A. M.
By order of the Board of Directors,
JUSTUS E. RALPH, Secretary.

O. W. CLAPP & CO., Inc.
Brokers and Commission Merchants,
No. 56 New St., NEW YORK,
SOLICIT AND EXECUTE ORDERS ON
New York Stock Exchange.
New York Produce Exchange.
New York Cotton Exchange.
Chicago Board of Trade.
Unsurpassed Private Wire Facilities to New York, Chicago and Western Exchanges.
Cable Address, OZRO.
Market Letters to applicants.
CLAPP'S SOUVENIR TO CUSTOMERS.

Mercantile Trust & Deposit Co.
OF BALTIMORE.
Paid-up Capital, \$1,000,000.
Surplus, \$1,000,000.
DEPOSITS RECEIVED
On which interest is allowed, governed by current rates obtainable.
TRUSTEES AND ADMINISTRATORS.
This company is a Legal Depository for funds in the hands of Trustees or Administrators, and allows interest on same pending distribution.
Authorized to act as Executor, Administrator, Guardian, Receiver or Trustee.
ACTS as Trustee of Mortgages of Corporations and accepts Transfer Agency and Registry of Stocks.
Safe Deposit Boxes for Rent.
Vaults supplied for Storage of Silver Chests, etc.
JOHN GILL, of R., President.

J. WM. MIDDENDORF.

Members Baltimore Stock Exchange.

WM. B. OLIVER.

MIDDENDORF, OLIVER & CO. BANKERS AND BROKERS,

No. 213 E. German Street, [KEYSER BUILDING.] Baltimore, Md.
Stocks and Bonds Bought and Sold on Commission. Special attention given to Municipal and other Investment Loans. Dealers in Foreign Exchange. Drafts on Europe and Letters of Credit furnished.

SPERRY, JONES & CO.

DEALERS IN Southern Investment Securities,
239 East German Street, Baltimore, Md.

OUR FACILITIES ARE UNEXCELLED.

JOHN L. WILLIAMS & SONS, BANKERS,

Dealers in RICHMOND, VA.

Southern Investment Securities,

MUNICIPAL BONDS A SPECIALTY.

Correspondence invited.

Fidelity and Judicial Bonds of every kind issued by

The United States Fidelity and Guaranty Co. OF BALTIMORE.

SOLICITS YOUR PATRONAGE.

Office, CALVERT AND GERMAN STREETS.
Telephone 268.

Bonds furnished Officers and Employees of Mercantile Houses, Banks, Railroads, Express and Telegraph Companies, Officials of States, Cities and Counties. Becomes Surety on Bonds of Guardians, Assignees, Executors, Trustees, Replevin, Injunctions, Administrators, Receivers, Attachment, and all undertakings in Judicial Proceedings in State and United States Courts. Does not act as Executor, Administrator or Trustee. Patronage of Lawyers specially solicited and special rates given.

CAPITAL..... \$500,000.00

STOCKHOLDERS' LIABILITY..... 500,000.00

TOTAL RESOURCES..... \$1,000,000.00

HON. FRANK BROWN, President. Governor of Maryland from 1892 to 1896.

JOHN R. BLAND, Vice Pres. and Gen. Manager.

J. KEMP BARTLETT, JR., Second Vice-Pres.

ALEXANDER PAYSON KNAPP, Secretary.

TOWNSEND SCOTT, Treasurer.

HON. ISIDORE KAYNER, General Counsel.

MARTIN LEHMAYER, Assistant Counsel.

WILLIAM B. RAYNER, Assistant Counsel.

**WOULDN'T
YOU LIKE
TO OWN AN
INTEREST IN
A GOLD MINE?**

Suppose you write for particulars about

THE BIG UNION MINING CO

This company owns and is now opening up rich gold mines in the famous Leadville Gold Belt of Colorado. The officers and stockholders of the company are not speculators but are well-known conservative business men. Here is some of them:

OFFICERS.

R. E. LYON, President.

STEPHEN H. EMMENS, Vice-President.

L. L. POWELL, Secretary.

H. B. TILDEN, Treasurer.

ARCHIBALD H. TAYLOR, Gen'l Counsel.

DIRECTORS.

B. L. Duke, the great tobacco manufacturer

Durham, N. C.

W. T. O'Brien of the American Tobacco Co.,

Durham, N. C.

Stephen H. Emmens, Pres. of the Mini and Industrial Exchange, New York City.

R. E. Lyon, of Baltimore, Md.

Geo. C. Schuermann, of Baltimore, Md.

L. D. Hearst, Cashier First Nat'l Bk Durham, N. C.

H. B. Tilden, of Baltimore, Md.

The stock of this company has been listed on the New York Mining and Industrial Exchange.

The office of the company is at 849 Equitable Building, Baltimore, Md.

The treasury stock now being offered affords an investment opportunity that is well worth looking into.

The Big Union Mines, the property of this company, lie on the same contact vein with the most noted of the great Leadville mines. One of these the "Little Johnny" is the greatest gold mine in Colorado and perhaps in the world. Its present output is about \$300,000 per month. It paid last year \$1,600,000 in dividends and is now paying monthly dividends of \$100,000 to \$300,000.

Indelible Check ... Perforator

PROTECT YOUR BANK ACCOUNT.

CHEAPEST
AND
BEST.

The work
with this
machine
can not be
altered.

Perforations
Indelibly
Inked.



Price \$5.00. Warranted for five years.

"Agents Wanted." Write for particulars.

Wesley Mfg. Company

41 Park Row, Times Building,
NEW YORK.

SURETY BONDS OF EVERY KIND.

American Bonding & Trust Co.

OF BALTIMORE CITY.

Equitable Building, Baltimore.

Total Resources \$1,091,550.49.

JAMES BOND, President.
JOSHUA HORNER, First Vice-President.
JOSEPH S. MILLER, Second Vice-President.
JOHN T. STONE, Secretary-Treasurer.
GEO. N. MACKENZIE, Asst. Secretary-Treas.

Accepted by the United States Government as Sole Surety on Bonds of Distillers, Importers, Custom House, Postoffice, Internal Revenue and other Government Officials and Employees, and by all Federal and State Courts. Gives Bond for Officers of Corporations, Lodges, Societies, etc., Clerks and all other Employees.

Does not act as Executor, Administrator, Trustee, Guardian, Receiver or Committee, BUT BONDS THOSE WHO DO ACT.

MARYLAND TRUST CO.

Corner South and German Sts.

BALTIMORE.

CAPITAL, - \$1,000,000.

A LEGAL DEPOSITORY FOR COURT AND TRUST FUNDS.

Acts as Financial Agent for States, Cities, Towns, Railroads and other Corporations. Transacts a general trust business. Lends money on approved security. Allows interest on special deposits. Acts as Trustee under Mortgages, Assignments and Deeds of Trust; as Agent for the Transfer or Registration of Stocks and Bonds, and for the payment of coupons, interest and dividends.

J. WILLCOX BROWN, PRESIDENT.

LYOUD L. JACKSON, FIRST VICE-PRES.

HENRY J. BOWDOIN, SECOND VICE-PRES.

J. BERNARD SCOTT, Secretary and Treasurer.

DIRECTORS

J. Willcox Brown, Leopold Strouse,
Wm. A. Marburg, Henry Walters,
Basil B. Gordon, H. A. Parr,
Lloyd L. Jackson, B. N. Baker,
Fred. M. Colston, Andrew D. Jones,
H. J. Bowdoin, James Bond,
Joshua Levering, Alexander Brown,
Frank Brown, Douglas H. Gordon,
W. B. Brooks, Jr., Clayton C. Hall,
W. H. Baldwin, J. D. Baker,
Fredk. W. Wood, F. S. Bangs,
F. M. Thieriot, John B. Garrett.

Alphabetical Index of Advertisers.

For "Classified Index" see pages 8, 5 and 7.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
Abbe, M. F. 21	Babcock & Wilcox Co. 15	Cahall Sales Department. 24	Dake Engine Co. 9	Easton & Burnham Machine Co. 37	Falst Rivet & Machine Co. 22	Gallert, S. 26	Hagood, J. E. 27	Illinois Central Railroad. 41	Jackson Railroad Co. 27	Kansas City, Pittsburg & Gulf R. R. 41	Lambert Gas & Gasoline Eng. Co. 18	Main Belting Co. 11	McFadden, Charles, Jr. 6	Murray, James & Son. 20	Pancoat, Henry B., & Co. 40	Q. & C. Company. 12	Rand Drill Co. 8	Sabel Bros. 27	Thomson, W. H., & Co. 35	Union Drawn Steel Co. 22	Valk & Murdoch Iron Works. 16	Wais & Roos Punch & Shear Co. 27	X	Y	Z
Adams, George S. 34	Babcock, H. H., Co. 8	Caldwell, H. W., & Son Co. 4	Dallett & Co. 27	Eccles, S., Jr. 28	Farquhar, A. B., Co., Limited. 29	Gandy Belting Co. 10	Haines, Jones & Cadbury Co. 48	India Alkali Works. 38	Jamieson Fire-Resisting Paint Co. 35	Kansas City Wheel Scraper Co. 39	Lambert Hoisting Engine Co. 4	Makepeace, C. R., & Co. 6	McGowan, John H., Co. 43	Murray, Douglas & Co. 38	Pancoat Ventilator Co. 35	Queen & Crescent Route. 41	Rawson Electric Co. 47	Saunders, John. 27	Toomey, Frank. 47	Union Electric Co. 47	Valley Iron Works. 14	Walker & Elliott. 20	Y	Z	
Adams, William H. 6	Baeder, Adamson & Co. 48	Cameron, A. S., Steam Pump Wks. 42	Damascus Bronze Co. 13	Eco Magneto Clock Co. 25	Fay, J. A., & Egan Co. 30	Garber, D. A. 6	Hales & Ballinger. 6	Ingersoll-Sergeant Drill Co. 24	Jeffrey Mfg. Co. 39	Keeler, E., Co. 36	Lane Manufacturing Co. 29	Manistee Iron Works. 42	McLanahan & Stone. 30	Murray, James & Son. 20	Partrick & Carter Co. 47	Queen City Printing Ink Co. 44	Record Printing House. 44	Saunders, D., Sons. 13	Tredegar Co. 28	Union Iron Works Co. 47	Vandusen Co., Inc. 43	Washington Slate Co. 34	Y	Z	
Ahrens & Ott Mfg. Co. 19	Bailey-Lebby Co. 21	Cameron & Barkley Co. 40	Daniels, Frank, & Co. 17	Eisenbrandt Cycle Co. 44	Fernandina Oil & Creosote Works. 28	Garrett, C. S., & Son. 35	Harrington & King Perforat'g Co. 4	International Corres. Schools. 6	Jenkins Bros. 48	Keidel, Henry, & Co. 44	Lang, S. Logan. 26	Mann & Co. 25	Mecklenburg Iron Works. 14	Murray, James & Son. 20	Paxson, J. W., & Co. 2	Queen City Supply Co. 16	Reed, F. E., Co. 44	Seabury, Charles L., & Co. 32	Trenton Iron Co. 4	U. S. Fidelity & Guarantee Co. of Baltimore. 269	Van Dusen Gasoline Engine Co. 18	Watkins & Hardaway. 6	Y	Z	
Aiken, Wm. Martin. 25	Bailey, John T., & Co. 24	Carter Cotton Gin Co. 38	Davis & Egan Mch. Tool Co. 27	Emerson Co. 28	Fidelity & Deposit Co. of Md. 25	Gates Iron Works. 21	Hartford Steam Boiler Inspection & Insurance Co. 40	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, James A. 6	Lefel, James, & Co. 43	Lowell Machine Shop. 13	Mercantile Trust & Deposit Co. 269	Murray, James & Son. 20	Peacock, George. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Shaw, Willis. 27	Trevor Mfg. Co. 29	U. S. Machine Co. 29	Van Noorden, E., & Co. 6	Webster, Warren, & Co. 18	Y	Z	
Alton & Wood. 25	Bally Mfg. Co. 47	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	General Electric Co. 37, 46	Hartley's Boiler Works. 16	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Lowell Textile School. 8	Mercants & Miners' Transp. Co. 41	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Shawhan-Thresher Machine Co. 47	Tudor Boiler Mfg. Co. 14	U. S. Sanitary Co. 8	Van Agnew, V. A. 6	Wedderburn, John, & Co. 25	Y	Z	
Akron Belting Co. 10	Bald, U., Machinery Co. 12	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	General Fire Extinguisher Co. 8	Hickman, Williams & Co. 27	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Saylor Wire Co. 8	Meres, C. R., Heater Mfg. Co. 17	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Sherwood Mfg. Co. 17	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Alabama Bridge & Boiler Co. 17	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Gilbert, C. M., & Co. 6	Hierz, Theo., & Son. 12	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Meyer, Dr. Otto. 6	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Shultz Belting Co. 10	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Alber & Byrne. 6	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Gillette-Herzog Mfg. Co. 33	Hirsch, L. K. 28	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Middendorf, Oliver & Co. 269	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Albro, E. D., Co. 28	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Golden's Foundry & Machine Co. 22	Holder, J. T. 25	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Mittshkun, M., & Co. 27	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Alexander Bros. 11	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Goubert Mfg. Co. 17	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Moore & McCrary. 6	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Allen Anti-Rust Mfg. Co. 35	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Gowdey, J. A., & Son. 38	Holder, J. T. 25	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Moore, John R. 27	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Allfree, J. B., Mfg. Co. 9	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Graphite Lubricating Co. 12	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	More, Jones & Co. 32	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Alsing, J. R., Co. 20	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Gregory Co., C. E. 27	Holder, J. T. 25	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Morse, Williams & Co. 48	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Bonding & Trust Co. 269	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Guilbert, John C. N. 38	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Mueller, H., Mfg. Co. 43	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Cotton Oil Co. 39	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hales & Ballinger. 6	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Mundt & Sons. 21	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Engine Co. 14	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hartford Steam Boiler Inspection & Insurance Co. 40	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Ship Windlass Co. 4	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hartley's Boiler Works. 16	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Supply Co. 37	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hascall Steam Generator Co. 6	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
American Tin Plate Machine & Mfg. Co. 35	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Heffernan, Wm. A. 35	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Andersen Jun & Co., J. *	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Help Wanted. 1	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Andrews, A. H., Co. 28	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hendch & Dromgold. 29	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Andrews, Perry. 6	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hendrick Mfg. Co., Limited. 8	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Apollo Iron & Steel Co. 24	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hewitt, F. R. 26	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Armitage-Herschell Co. *	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hickman, Williams & Co. 27	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Armitage Mfg. Co. 35	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hierz, Theo., & Son. 12	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Asbrand, C. W. 35	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hirsch, L. K. 28	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Ashtabula Tool Co. 39	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Hoe, R., & Co. 22	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Asphalt Ready Roofing Co. 34	Baldwin Locomotive Works. 13	Chapman Valve Mfg. Co. 40	Davis Foundry and Mch. Works. 43	Empire Glass & Decoration Co. 35	Fifield Tool Co. 12	Holder, J. T. 25	Holmes, E. & B., Machinery Co. 29	Jackson Railroad Co. 27	Jewell Belting Co. 11	Keiley, O. S., Co., The. 48	Lewis, H. F., & Co., Ltd. 32	Ludlow Valve Mfg. Co. 40	Munson Bros. 24	Murray, James & Son. 20	Peck-Hammond Co. 4	Queen City Supply Co. 16	Reed, F. E., Co. 44	Simpson, J. S. & G. F. 21	Tyree, S. C. 25	U. S. Machine Co. 29	Vans Agnew, V. A. 6	Wetherill, Robt., & Co. 15	Y	Z	
Atkins, E. C., & Co. 31	Baldwin Locomotive Works.																								